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ABSTRACT

An Instructional Support System for Occupational Education (ISSOE) was designed to support and facilitate instruction by systematizing those functions essential to occupational programs--reporting, monitoring, and evaluating. ISSOE operates on several levels simultaneously: individual student achievement can be reported, class progress can be monitored, and entire programs can be evaluated. ISSOE rests upon a performance-based modularized curriculum as basis for reporting the achievement of individual students. The ISSOE curriculum package is a compendium of objectives which lead to employability in the world of work. These objectives have been based on task analyses, and the judgments of experienced teachers and are employer-validated. They are written in behavioral terms to provide a criterion-referenced testing system. Phase I (1975-76) focused on the development and testing of a system of curriculum development for the ISSOE effort. Phase II (1976-77) provided for format revision in the model. Phase III (1977-78) resulted in the following: (1) transition of the system from Cornell to other higher education institutions in New York State; (2) development of a process of employer validation of ISSOE major objectives in regard to their relevance to competencies needed by entry level workers in related occupations; and (3) the designing and piloting of a prototype competency-based student reporting system for ISSOE, with the manual system to be tested during 1978-79. (Author/CT)

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ED170513

FINAL REPORT

ISSOE

Prototype Student Reporting System

in cooperation with

The Office of Occupational Education
New York State Education Department,
University of the State of New York,
Albany, New York

September 1978

CE 020 454

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Al Edsall

ISSOE Project Director

Cornell Institute for Occupational Education

Report prepared by

Madeline B. Dean

INSTRUCTIONAL SUPPORT SYSTEM FOR OCCUPATIONAL EDUCATION

ABSTRACT

An Instructional Support System for Occupational Education (ISSOE) has been designed to support and facilitate instruction by systematizing those auxiliary functions which are essential to occupational programs--reporting, monitoring and evaluating. ISSOE operates on several levels simulatneously: individual student achievement can be reported, class progress can be monitored, and entire programs can be evaluated. Reporting, monitoring and evaluating all rest upon the same data base: the records of the individual students generated at the classroom level.

ISSOE rests upon a performance-based modularized curriculum as a basis for reporting the achievement of individual students. The uniform curriculum format provides compatibility for programs across the state both within a program area and across program areas.

The ISSOE curriculum package is a concise compendium of objectives which lead to employability in the world of work. These objectives have been based on task analyses, the judgement of experienced teachers, and are employer validated. They are written in behavioral terms to provide a criterion-referenced testing system. Related objectives have been arranged in modules to facilitate instructional planning.

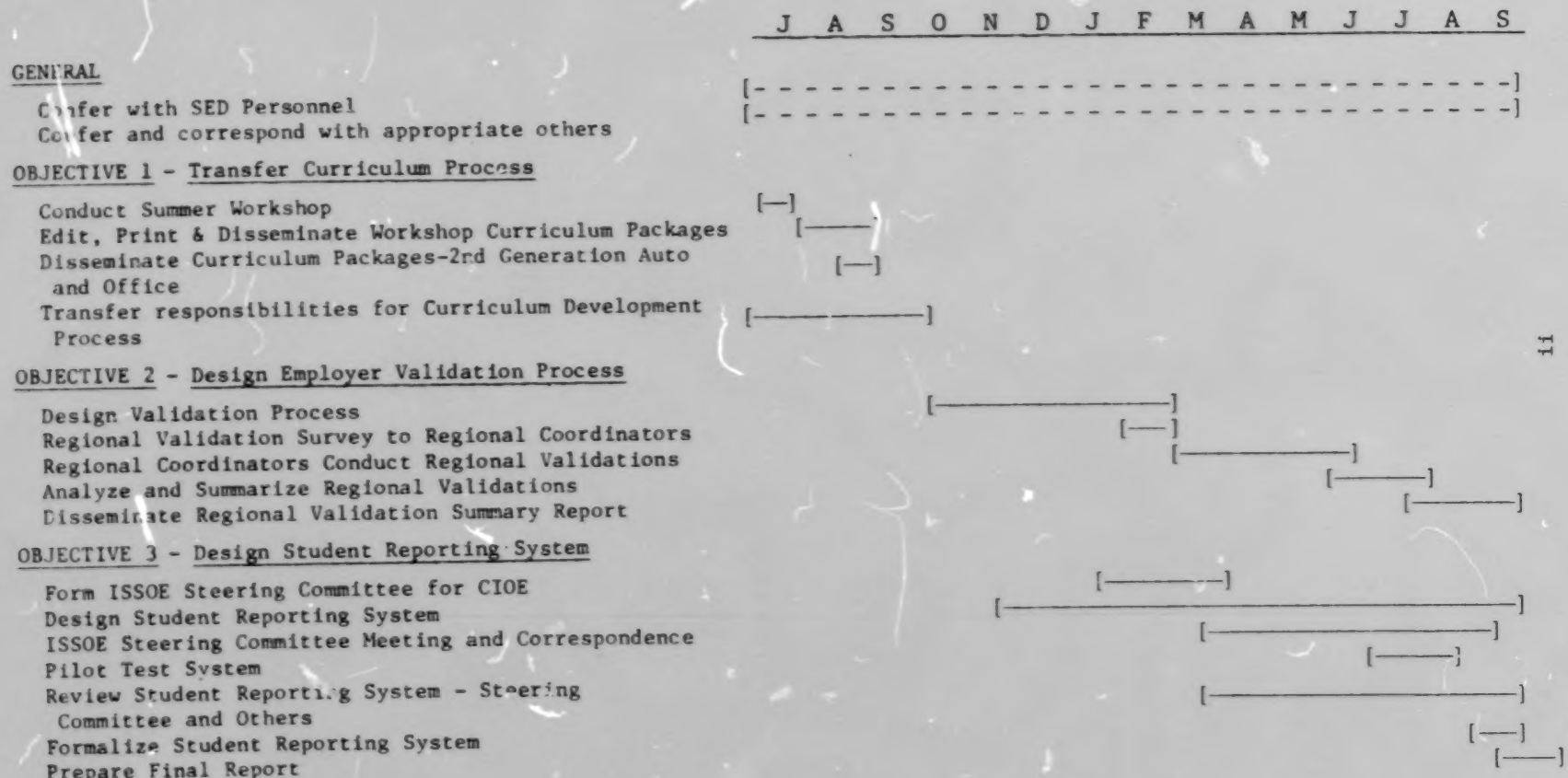
Phase I (1975-76) focused on the development and testing of a system of curriculum development for the ISSOE effort. Automotive Mechanics and Office Training programs were utilized to develop the ISSOE Model which stressed a uniform format for developing performance based curriculum. Thirty-seven teachers and four ISSOE regional coordinators at six secondary educational settings in three different geographical areas of New York State were involved in piloting the model.

Phase II (1976-77) provided for format revision in the model. Emphasis was shifted to the grouping of objectives to produce major program objectives and developing criterion-referenced assessment instruments. Statewide expansion resulted in thirty comprehensive schools, nineteen Area Occupational Centers and two major city school systems testing the system and the second generation curriculum packages.

Phase III (1977-78) resulted in the following:

1. Transition of The ISSOE Curriculum Development System from CIOE to other higher education institutions in New York State and the Bureau of Occupational Education Curriculum Development, New York State Education Department.
2. Development of a process of employer validation of ISSOE Major Objectives in regard to their relevance to competencies needed by entry level workers in related occupations.
3. A prototype competency based student reporting system for ISSOE was designed and piloted. The manual system to be tested during 1978-79.

CIOE - ISSOE WORK PLAN 1977-78


J A S O N D J F M A M J J A S
GENERAL
Confer with SED Personnel
Confer and correspond with appropriate others
OBJECTIVE 1 - Transfer Curriculum Process
Conduct Summer Workshop
Edit, Print & Disseminate Workshop Curriculum Packages
Disseminate Curriculum Packages-2rd Generation Auto and Office
Transfer responsibilities for Curriculum Development Process
OBJECTIVE 2 - Design Employer Validation Process
Design Validation Process
Regional Validation Survey to Regional Coordinators
Regional Coordinators Conduct Regional Validations
Analyze and Summarize Regional Validations
Disseminate Regional Validation Summary Report
OBJECTIVE 3 - Design Student Reporting System
Form ISSOE Steering Committee for CIOE
Design Student Reporting System
ISSOE Steering Committee Meeting and Correspondence
Pilot Test System
Review Student Reporting System - Steering Committee and Others
Formalize Student Reporting System
Prepare Final Report

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This final report is organized as a combination of three separate reports on independent, but related objectives for the ISSOE effort (Project #VEA-78-3A-911) at the Cornell Institute for Research and Development in Occupational Education.

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PART I

OBJECTIVES AND ACCOMPLISHMENTS - ISSOE EFFORT - CIOE-1977/78

The following were the three major objectives for the ISSOE effort (Project Grant #VEA-78-3A-911) at the Cornell Institute for Research and Development in Occupational Education (CIOE) during 1977-78.

I. Transition of The ISSOE Curriculum Development System from CIOE to other higher education institutions in New York State and the Bureau of Occupational Education Curriculum Development, New York State Education Department.

II. Develop a process to validate ISSOE Major Objectives in regard to their relevance to competencies needed by entry level workers in related occupations.

III. Design and pilot test a prototype competency based student reporting system for ISSOE.

ACCOMPLISHMENTS

Objective I. - Transition of "The ISSOE Curriculum Development System" from CIOE to other higher education institutions in New York State and the Bureau of Occupational Education Curriculum Development, New York State Education Department.

A summer "ISSOE Curriculum Development Workshop" attended by 72 teachers new to the ISSOE system was conducted at Cornell University during July 1977. At this workshop participants from three higher education institutions (NYU-SUC Buffalo-SUNY Utica/Rome) and the Bureau of Occupational Education Curriculum Development, New York State Education Department, Albany, were programmed into the activities to orient them to the ISSOE concepts and the ISSOE Curriculum Development Process. After this workshop, responsibility for the ISSOE Curriculum Development Process was transferred to these institutions. A very successful workshop was conducted according to an independent participation evaluation survey.

Curriculum packages for Conservation (125 copies), and Health Assisting Occupations (200 copies) following the ISSOE mode were edited, printed and delivered in early September to the 1977 workshop participants with additional copies to the ISSOE Director, State Education Department for statewide distribution. ISSOE Automotive Mechanics (600 copies) and Office Training curriculum packages (500 copies) revised from the 1976-77 effort were also produced and delivered in early September to involved teachers and the State Education Department.

Copies of 22 ISSOE curriculum packages have been requested and sent to individuals (predominantly teachers) in the following states: Alabama, Georgia, Hawaii, Maryland, Ohio, Pennsylvania, Tennessee and Virginia.

Objective II

Develop a process to validate ISSOE Major Objectives in regard to their relevance to competencies needed by entry-level workers in related occupations.

A system to conduct regional employer validations of ISSOE tasks (abbreviated major objectives) was developed. Regional validation surveys were conducted by twelve ISSOE regional coordinators to field test the proposed validation process. Statewide validation survey instruments were completed by 183 individuals in the Automotive Mechanics field and 203 individuals in the Office Occupations field.

It is concluded that the ISSOE Regional Validation process is an appropriate and economical process to survey large numbers of employers to determine if ISSOE tasks (Major Objectives and Competencies) are needed by entry-level workers in local business and industrial concerns. Results of the regional validation process demonstrated that regional validation of the ISSOE tasks can be accomplished as part of the routine duties of the ISSOE regional coordinator.

The system was tested utilizing the areas of Automotive Mechanics and Office Training. It appears that this approach can be replicated for other occupational education areas.

Summary and analysis of the regional validations are included in the Employer Validation Section.

Objective III

Design and pilot test a prototype competency based student reporting system for ISSOE.

A prototype Manual Sort Student Reporting System for ISSOE was designed and piloted at CIOE during 1977-78. This system was developed utilizing a large steering committee (25) composed of representatives of occupational educators, local employers, New York State Department of Labor and Higher Education Institutions.

The ISSOE Student Reporting System Guide is included in this report. It is recommended that the prototype Manual Sort Student Reporting System for ISSOE be field tested at selected sites in New York State during 1978-79.

Cornell Institute for Occupational Education

Department of Education
Cornell University

ISSOE

SUMMER TEACHERS WORKSHOP

in cooperation with

Institute for Research and Development in Occupational Education, City University of New York, New York

and

The Office of Occupational Education, New York State Education Department, University of the State of New York, Albany, New York

October 1978

The New York State College of Agriculture and Life Sciences, a Statutory College of the State University at Cornell University, Ithaca, NY 14853.

I S S O E

Summer Workshop Participants
Cornell University

July 5-15, 1977

State Education Department Personnel

Douglas T. Adamson
Carl Benenati
Edna Cardish
Ida Conley
Peter Cooke
Kenneth DeCerce
Earl Hay
Kenneth James
Rumford Lockman
Joseph Messier
Kenneth Ormiston
Ruth Ellen Ostler
Marion Potter
Alvin Rubin

Cornell University Personnel

Lori Avery
Madeline Dean
Alan R. Edsall
Barbara Thomas
Phyllis York
Pellegrino Zuzio

City University of New York Personnel

Theodore Abramson
Gail Banchiak
Daniel Dunn
Edward Kagen

Regional Coordinators

Richard Bergh - Steuben-Allegany BOCES
Michael DiVito- Rochester City
Gilbert Ferris- Steuben-Allegany BOCES
Jane Gilbert - Orange BOCES
Wayne Hughes - Erie BOCES
Jerita Newhouse-Westchester/Putnam BOCES
Adrienne Vogrin-Hamilton/Fulton BOCES

Teacher Trainers

Nicholas Acquiva - SUC-Utica/Rome
James Lahren - SUC Buffalo
John Roeder - SUC Buffalo
Ron Todd - NYU

Carpentry

Peter Bonhote - Brookhaven Oc.Cen.
Larry Carlson - Suffolk
R. Cassidy - Oneida BOCES
John DeSocio - Oneida/Madison
W. Galganski - Genesee/Wyoming
I. Gombert - Rockland BOCES
Donald Holtz - Erie BOCES
R. Jones - Oneida BOCES
T. J. Koch - Tomp./Seneca/Tioga
J. Lucinski - Rockland BOCES
P. Marolf - Jefferson/Lewis
J. McLaughlin - L.A.Wilson Tech.
R. Murdock - Putnam/Westchester
J. Nadeau - Saratoga
B. W. Paquette - Westchester
Ralph Perreta - SUC BOCES
Allen Rowe - Ulster BOCES
Thomas Schlueter- Oswego
A. Seltenreich - L.A.Wislon Tech.
Dale Shaw - Monroe
Edward Shea - Syracuse Cent.Tech.
Ralph Stockham - Monroe/Orleans
R. Stout - St.Lawrence BOCES
Anthony Tallini - East Meadow

Health Assisting

M. Lorraine Beake - Cen.Tech H.S.Syracuse
Arlene Bolton - Oswego BOCES
Caroline D'Aluisio- Saratoga BOCES
Katherine Finnegan- Putnam/Westchester
Anita Fries - Binghamton BOCES
Marjorie Hadley - Hornell BOCES
Mary M. Hahn - Erie BOCES #1
Sandra Haines - Binghamton BOCES
Florence Hoffman - Cen.Tech.Syracuse
Marguerite Jasper - New Rochelle High School
Jean Kulakowski - Cayuga/Onondaga BOCES
Esther Ladd - Schuyler/Chemung/Tioga
Agnes Lamb - Madison/Oneida BOCES
Marilyn B. Lee - Steuben/Allegany
Betty Low - OAOC-Milford
Rita L. Malone - L.A.Wilson Tech.
Lucille M. Rowe - Jefferson Voc.Tech
Tresure Signor - Tomp./Seneca/Tioga
Doris Simmons - Ren./Columbia BOCES
Stephene R. Smith - Tomp./Seneca/Tioga
Carolyn Walker - Herkimer Co.
Margery Wechler - New Rochelle High School
Clara A. Zogg - Onondaga Co.BOCES

Conservation

George Beha - St.Lawrence BOCES
James Capron - Finger Lakes Occ.
Marvin Clinch - Madison/Oneida
Kevin Colgan - Otsego BOCES
Charlie Cook - Steuben BOCES
J. Stanley Hall - Genesee BOCES
M. W. Lawrence - Northern Catskill
George McCabe - Westchester/Putnam
William Melious - Broome/Tioga BOCES
Michael Urban - Ren./Columbia BOCES
Howard Wells - Tri-Co.Area Center

Retailing

Thomas Ablam - Lewis Vocational
Harvey Bender - St.Lawrence BOCES
Gary R. Brady - Dutchess BOCES
George Bremser - Henninger High
Robert C. Ciera - Yonkers High School
Diane Granger - Wayne BOCES
Anton Hatfield-Nicholson - Steuben/Allegany
Stephen High - Wayne Finger Lakes
Bennett Hirsch - St.Lawrence BOCES
Howard A. Landon - Schuyler/Chemung/Tioga
Millee Moretto - Genesee/Wyoming BOCES
Virginia Nowik - Foremen Center
Franklin Tuttle - Cicero High
Alan Zoccolillo - Yonkers High School

SUMMARY

ISSOE TEACHER'S SUMMER WORKSHOP-1977

Transition of The ISSOE Curriculum Development Process from CIOE to other higher education institutions in New York State and the Bureau of Occupational Education Curriculum Development, New York State Education Department was the major objective of the summer ISSOE Teacher's Workshop held on the Cornell University campus from July 5-15, 1977. During this workshop, representatives from three higher education institutions (NYU-SUC Buffalo-SUNY Utica/Rome) and the Bureau of Occupational Education Curriculum Development, New York State Education Department were programmed into the activities to orient them to the ISSOE concepts and the ISSOE Curriculum Development Process. After this workshop, responsibilities for the ISSOE Curriculum Development Process was transferred to these institutions.

The workshop was attended by 24 Carpenter Teachers, 11 Conservation Teachers, 23 Health Assisting Teachers, 14 Retailing Teachers, 7 ISSOE Regional Coordinators, 4 Occupational Teacher Trainers, 14 representatives of the New York State Education Department, 4 representatives from the Occupational Education Institute-CUNY and 6 representatives from the Occupational Education Institute-Cornell.

Major activity of the workshop was the development of curriculum in the ISSOE mode by teachers. This was basically accomplished by using large group orientation, instruction and review sessions and small group work sessions facilitated by persons knowledgeable in group process and the ISSOE Curriculum Development Process.

The resulting teacher authored curriculum packages were edited, printed and distributed to teachers who attended the workshop with additional copies to the Division of Occupational Education Supervision, State Education Department for statewide distribution in early September. To day, 122 Conservation and 182 Health Assisting ISSOE Curriculum packages have been distributed. Also distributed were 595 Automotive Mechanics and 493 Office Training ISSOE second generation packages.

Twenty-two requests for ISSOE curriculum packages have been sent to individuals (mainly teachers) in the following states: Alabama, Georgia, Hawaii, Maryland, Ohio, Pennsylvania, Tennessee and Virginia.

The 1977 ISSOE Summer Teachers' Workshop was planned and coordinated by representatives of the Division of Occupational Education Supervision-State Education Department, Institute for Occupational Education-CUNY and the Institute for Research and Development in Occupational Education-Cornell. Responsibilities for the workshop were (1) overall plan and general sessions-CUNY and Cornell; (2) facilities and arrangements-Cornell; (3) facilitating curriculum development-Carpentry and Retailing-CUNY; Conservation and Health Assisting-Cornell.

Guidelines suggested for expansion of the ISSOE curriculum effort statewide to teachers not at the summer workshop included the following steps:

1. Awareness
   - Regional coordinators contact teachers in their regions for orientation and involvement.
   - Teachers involved in summer workshops encourage other teachers to join the effort.
   - Area facilitators (teacher trainers) assist in process by providing support - especially inservice activities.
2. Trial
   - Regional coordinators and teachers using the ISSOE system encourage other teachers to try ISSOE modules with their classes.
3. Evaluate
   - Critique trial efforts and ISSOE curriculum with other teachers in local setting and at regional meetings.
   - Regional coordinator key in facilitating this process.
4. Acceptance or Rejection

I S S O E

TEACHERS' SUMMER WORKSHOP

INFORMATION AND ORIENTATION PACKAGE

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University

Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for
Occupational Education
Telephone 607-256-6515

M E M O R A N D U M

TO: REGIONAL COORDINATORS

FROM: AL EDSALL

DATE: JUNE 8, 1977

RE: INFORMATION ON ISSOE TEACHERS' SUMMER WORKSHOP AT CORNELL UNIVERSITY, JULY 5 - 15, 1977

Enclosed is a packet of information giving some general and specific information regarding the ISSOE Summer Workshop and accommodations in the Ithaca area.

We are recommending the North Campus Dorms and the Sheraton Inn as preferred places to stay along with the State Parks. Teachers at the previous summer workshops congregated at the Sheraton for their evening debriefing sessions.

As soon as teachers have agreed to attend the workshop, please send me their names and addresses so that we can send them a similar packet.

AE:py

Enclosures

P.S. Additional packets are enclosed to distribute to teachers who definitely plan to attend the workshop. I hope this will hasten the process.

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University

Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for
Occupational Education
Telephone 607 256-6515

M E M O R A N D U M

TO: THE DEDICATED EDUCATORS WHO HAVE CHOSEN TO ATTEND THE ISSOE SUMMER WORKSHOP AT CORNELL

FROM: AL EDSALL, PROJECT DIRECTOR, CORNELL INSTITUTE FOR RESEARCH AND DEVELOPMENT IN OCCUPATIONAL EDUCATION

DATE: JUNE 9, 1977

RE: INFORMATION ON ISSOE TEACHERS' SUMMER WORKSHOP AT CORNELL UNIVERSITY, JULY 5 - 15, 1977

Your regional coordinator has been requested to distribute the attached information in order to facilitate our plans for the ISSOE Summer Workshop to be held at Cornell, July 5-15, 1977. The packet of information explains some general and specific information regarding the workshop and accommodations in the Ithaca area.

We are recommending the North Campus Dorms and the Sheraton Inn as preferred places to stay along with the State Parks. Teachers at the previous summer workshops congregated at the Sheraton for their evening debriefing sessions.

Please return, to me, the appropriate sheet indicating that you will attend and what your area of instruction is.

Looking forward to a productive workshop.

AE:py

Enclosures

I S S O F

CORNELL SUMMER WORKSHOP INFORMATION

July 5 - 15, 1977

REGISTRATION

Tuesday, July 5, 1977 - Registration at North Campus Union; 11 am - 12 noon

Workshop:

Wednesday, July 6, 1977 - 8:30 am - 4:30 pm, Martha Van Rensselaer Hall, Cornell campus, Lecture Room 207, Opening Session.

Thursday, July 7 - Friday, July 15, 1977, Martha Van Rensselaer Hall, Rooms NG 02, NG 03, NG 06, NG 35. Sessions will commence in Lecture Room 207 at 8:30 am each day.

HOUSING

Campus - North Campus Dorm, Cornell Campus - Tel. 607-256-6290. Contact Kristine Molt for reservations. (See attached sheet for more information.)

Single Accommodations - $8.75 per person/per night
Double Accommodations - $6.35 per person/per night
Children 12 and under - $3.13 per night

*Other - Ithaca Sheraton Inn, 1 Sheraton Drive, Ithaca, NY. Tel. 607-257-2000 (See attached sheet for more information.)

Single Accommodations - $15 per person/per night
Double Accommodations - $23 per night

Ramada Inn, 222 South Cayuga St., Ithaca, NY. Tel. 272-1000

Single Accommodations - $17 per person/per night
Double Accommodations - $24.50 per night

Howard Johnson, N. Triphammer Rd. & Rt. 13, Ithaca, NY. Tel. 607-257-1212

Single Accommodations - $18.50 per person
Double Accommodations - $12.25 per person
} Rates apply only if 15 rooms or more are reserved

*State Park Camp Sites: No reservations, first come, first served basis

Buttermilk Falls, Robert H. Treman, Taughannock Falls
Rates: $4.50/day, $5.00/day with electricity

MEALS

Three campus cafeterias will be in operation during the summer: North Campus Union, Willard Straight Ivy Room, Pancake House (Noyes Lodge), Student Cafeteria, Statler (lunch only), and the Dairy Bar (lunch only). Rates at the centers are:

Breakfast - $2.35
Lunch - $2.35
Dinner - $3.50
} Daily meal tickets - $5.90/day
Weekly meal tickets- $29.50 (15 meals)

PARKING

Parking stickers will be available for parking in the "B" lot and the "CC" lot @ $.25/day. Bus service is available from these lots and bus fare is $.10. Bus passes may be purchased for $1.00/week. Since parking is limited especially in the "B" lot, may we strongly suggest that car pools be formed when possible. Parking stickers must be displayed at all times as unmarked cars are ticketed promptly.

*See enclosed brochure for other motel accommodations and private campsites.

I S S O E

CORNELL SUMMER WORKSHOP
July 5-15, 1977

PLEASE COMPLETE AND RETURN

NAME: _____

SCHOOL ADDRESS: _____

_____

PHONE: _____

HOME ADDRESS: _____

HOME PHONE: _____

If you plan to attend the ISSOE workshop please complete the following additional questions:

1. PARKING

_____I will require a "B" lot sticker at $.25/day

_____I will require a "CC" lot stocker at $.25/day

_____I will not require any sticker, will be part of a car pool

2. I WILL BE STAYING AT _____

_____

3. PLEASE LIST INSTRUCTIONAL AREA:

_____Carpentry

_____Conservation

_____Health Assistant

_____Retailing

NORTH CAMPUS FACILITIES

North Campus Dorms are located on the outskirts of the Cornell campus. There are several high and low rise units each of which contain 4 units 6 suites to each unit. Each suite has two double and two single rooms with a bath provided for each suite. There is also a lounge for each suite and one kitchen per unit.

Building #9, Unit 3 has been reserved for our use during the ISSOE Teachers Workshop. This is a low rise building. A large lounge complete with fireplace, TV, piano and comfortable chairs adjoins Units 3 & 4. There are also laundry facilities in each building.

Single accommodations at North Campus Dorms are $8.75 per person/per night and double accommodations are $6.25 per person/per night. Children 12 and under are charged $3.13 per night if a cot is furnished. You may bring your own sleeping bags for children and in this case no charge is made for the child.

North Campus Union is located close to the dorms (see campus map) and has many facilities to recommend it. A cafeteria on the top floor is open for three meals a day (see attached sheet for prices). Downstairs a large game room with pool tables, ping pong tables and games is open. Just off the game room is another large lounge. The "Tavern", with hours from 4:30 - 6 pm and 9 pm - 1 am, is also located in the basement level. A store, selling snacks, laundry supplies and miscellaneous items is open from 7:30 am to 9 pm.

Reservations may be made for accommodations in the North Campus Dorms by contacting Kristine Molt at 607-256-6290 or by mailing the lower section of this notice to her: Kristine Molt, Conference Office, 220 North Campus Dorms, Cornell University, Ithaca, New York 14853. Parking will be available in the "CC" lot and bus service to and from campus is available.

MAIL TO: Kristine Molt
Conference Office
220 North Campus Dorms
Cornell University
Ithaca, New York 14853

ISSOE TEACHERS SUMMER WORKSHOP

Please reserve _____ rooms at North Campus
(number) (single) (double)

Dorms, Bldg. #9, Unit 3 for: _____
(arrival date) (departure date)

_____
(name, please print)

_____
street address city state

ITHACA SHERATON INN
1 Sheraton Drive

The Ithaca Sheraton Inn is located just off Triphammer Road about 1/2 mile east of Rt. 13, (Use Triphammer Rd. Exit) and about 3 miles from the Cornell campus.

Under new management, the Sheraton Inn has much to offer. A heated, indoor pool with saunas is a delightful place to relax. The dining room is open for three meals a day with a varied menu. Their remodeled lounge features nightly live entertainment and a dance floor.

New colored TV with free nightly movies have just been installed in every room. Single accommodations at the Sheraton are $15 per person, double accommodations, $23 per night. This is a special rate for ISSOE workshop.

Reservations may be made by contacting Mrs. Ainsley Bertrand at 607-257-2000 or if you wish you may fill out the portion below and mail it to her.

ISSOE TEACHERS SUMMER WORKSHOP

MAIL TO: Mrs. Ainsley Bertrand
Ithaca Sheraton Inn
1 Sheraton Drive
Ithaca, New York 14850

Please reserve _____
(single) (double)

rooms for me for: _____
(date of arrival) (date of departure)

_____
(name, please print)

_____
(street) (city) (state) ZIP

Information that may be helpful to you during your visit to Cornell and Ithaca

Airports:

Ithaca - (607) 257-0456 (Allegheny Airlines)
Syracuse (315) 474-3311 (American Airlines)
(315) 422-1121 (Allegheny Airlines)

Airport Limousine Service in Ithaca:

Airline Limousine Service - 272-3030
Major Taxi - 273-8038

Taxis:

Major Taxi - 273-8038
New City Taxi - 273-8513
Terminal Taxi - 272-3333

Car Rental:

Avis Rent-A-Car 257-0441
Hertz 272-6622
Cayuga Ford Rent-A-Car 257-0222
Chrysler Daily Rentals 273-8585 (Erie J. Miller)
Townley Leasing Inc. 272-9010

AAA 273-1777

Bus Station
West State and Fulton Sts. - 272-7930

Shopping in Motel Area: (Sheraton, Holiday & Howard Johnson)

Pyramid Mall - Triphammer Rd. beyond Holiday Inn
Cayuga Mall - Triphammer Rd. opposite Howard Johnson (Grand Union - Open 7 days)
Triphammer Shopping Ctr. - Triphammer Rd. near Sheraton Inn
Mimi Mall - located in back of Triphammer Shopping Center & Sheraton Inn

Drug Stores in Motel Area:
Fay's - Cayuga Mall - Triphammer Rd. opposite Howard Johnson - 257-3035
Rite Aid Prescription Center - Triphammer Shopping Center - 257-1500
Brooks Pharmacy - Village Green (Cayuga Heights) 257-2666 (24-hour service)
Night answering service - 273-3341 Emergencies

Doctor:

Emergency Room at Tompkins County Hospital - located on Rt. 96 North 274-4411
Family Medicine Center - near Triphammer Shopping Center - 274-4455 (open Monday-Friday, 9 am - 9 pm; to reach a doctor after hours call 274-4111.)

State University College at Buffalo
Vocational Technical Education Program
1300 Elmwood Ave.
Buffalo, New York 14222

1977 SUMMER SCHOOL OFFERING

VTE 594 Instructional Support Systems for Occupational Educational (ISSOE) Curriculum Workshop

3 Credit Hours

ISSOE is a modularized approach to occupational curriculum development. Currently prepared secondary school level occupational course outlines and units of instruction for teachers will be used, altered, revised and the student will then develop selected modules consisting of behavioral objectives, major objectives, enabling objectives, suggested instructional materials and techniques, and criterion referenced assessments for the major objectives.

ELIGIBILITY: ISSOE participants and if you are attending the ISSOE Workshop being offered by CUNY and CORNELL on July 5 - 15, 1977.

COST: Applicants can receive 3 semester hours of graduate credit for $178.05, or 3 hours of undergraduate credit for $97.55.

CONTACT PERSON: Dr. John A. Roeder, Professor Above Address

YOUR INTEREST AND RESERVATION FOR ENROLLMENT IS REQUESTED:
Call 716 862 5504 for reservation

OR

Mail the application below before JUNE 30, 1977.

NAME:_____ POSITION:_____

ADDRESS:_____ PHONE:_____

_____ ZIP CODE:_____

TYPE OF ENROLLMENT: GRADUATE_____. UNDERGRADUATE_____.

Mail to: Dr. John A. Roeder, Professor
ISSOE WORKSHOP
State University College at BUFFALO
1300 Elmwood Ave.
Buffalo, New York 14222

Make Tuition Check Payable to: "State University College at Buffalo"
(Make sure student name and social security number are on check.)

INDIVIDUALIZED STUDY CONTRACT

Name: _____ Date: _____

Address: _____ Phone: _____

Course Number: Ed. 400, Field Experience
Ed. 500, Informal Study
Ed. 600, Internship

Credit hours: 3

undergraduate
graduate (circle one)

Dates in residence on Cornell Campus (inclusive): 7/4/77 - 7/15/77

Topic: DEVELOPING OCCUPATIONAL CURRICULUM IN THE ISSOE MODE

Outline of plan of study (probably number of student-faculty contact hours; procedure-assigned readings, fieldwork, library research, etc.; expected products such as papers or reports; evaluation procedures):

Develop curriculum to fit the ISSOE format in my area of instruction during a two-week workshop (8 hr./day) at Cornell from July 4, 1977 - July 15, 1977. After the workshop a "Plan-of-Action" will be developed detailing implementation strategies during the 1977-78 school year.

Activities will be under the direction of Al Edsall, Director, ISSOE Effort, Department of Education, Cornell University.

To the student: If the plans of study outlined above is agreeable, please sign and return two copies of this form, along with the enclosed Special Program application, to:

Summer Study Coordinator
Dept. of Education, Stone Hall
Cornell University, Ithaca, NY 14853

If the plan is not acceptable, please make the necessary changes and return to the supervising faculty member for consent with accompanying rationale.

Signatures:

Supervising faculty member — Date

Student — Date

STUDENT: Please retain yellow copy for your records.

UPPER DIVISION COLLEGE
State University College at Utica/Rome

Department of Vocational-Technical Education
State University College, Utica/Rome
811 Court Street
Utica, New York 13502

COLLEGIATE CREDIT FOR ISSOE 1977 WORKSHOP

VTE 491 (Undergraduate)
OR
VTE 697 (Graduate)

"Instructional Support Systems for Occupational Education (ISSOE) Curriculum Workshop"

3 semester hours

ISSOE is occupational curriculum development through the modularization of occupational subject courses. Currently prepared secondary occupational course outlines and units of instruction will be altered, revised and developed into selected modules. Emphasis will be in writing major behavioral objectives and enabling objectives; identifying instructional materials and techniques; and developing criterion-referenced assessments of the major behavioral objectives.

ELIGIBILITY: ISSOE Workshop Participants (July 5 - 15, 1977) offered by CUNY and Cornell at Ithaca, New York and funded by the State Education Department.

COSTS: Undergraduate - $ 92.55 (3 s.h.)
Graduate - 178.05 (3 s.h.)

CONTACT PERSON: Nicholas J. Acquaviva (Above Address)

Your Interest and Reservation for Enrollment is Requested:

CALL 315/792-3322 OR

MAIL application below before June 30, 1977.

- -

NAME: _____ POSITION: _____

ADDRESS: _____ PHONE: _____

_____ ZIP CODE: _____

TYPE OF ENROLLMENT: GRADUATE _____ UNDERGRADUATE _____

Mail To: Professor Nicholas J. Acquaviva
ISSOE Workshop
State University College at Utica/Rome
811 Court Street
Utica, New York 13502

Make Tuition Check Payable to: State University College at Utica/Rome

(Make sure student name and social security number are on check)

Phone: (607)256-2130

I S S O E
TEACHERS' SUMMER WORKSHOP
Cornell University
July 5-15, 1977

TUESDAY, JULY 5

11:00 - 12:00		REGISTRATION - NORTH CAMPUS UNION	
12:00 - 1:15		LUNCH	
1:30 - 1:40	H. Wardeberg G. Winter L. Cohen	OPENING SESSION - WELCOME & INTRODUCTIONS	MVR N207
1:40 - 2:00	D. Adamson	ORIENTATION TO ISSOE	
2:00 - 2:10	A. Edsall	DIRECTIONS & PURPOSE OF WORKSHOP	
2:10 - 2:30	K. DeCerce	ROLE OF REGIONAL COORDINATORS & TEACHER TRAINING INSTITUTIONS	
2:30 - 3:00	T. Abramson A. Edsall/D. Zuzio	OVERVIEW & OUTCOMES	
3:00 - 3:20	T. Abramson A. Edsall	FORMAT AND DEFINITION OF TERMS	
3:30 - 3:45		DISCUSSION	
3:45 - 4:15		ADMINISTRATIVE DETAILS	

WEDNESDAY, JULY 6

8:00 - 8:20	E. Hay A. Edsall	TASK ANALYSIS - BASIS OF ISSOE DETERMINING PARAMETERS OF OCCUPATIONAL AREA DEFINING UNITS AND MODULES	MVR N207
8:45 - 9:05		COFFEE BREAK - STUDENT LOUNGE - MVR FIRST FLOOR	
9:05 - 11:45	C. Benenati K. James R. E. Ostler M. Potter	GROUP ACTIVITIES Determine Parameters Defining Units & Modules	MVR NG 02 NG 06 NG 03 NG 35
11:45 - 12:45		LUNCH	
12:45 - 1:45	T. Abramson R. Tarrier	BEHAVIORAL OBJECTIVES	MVR N207
1:45 - 2:30	C. Benenati K. James R. E. Ostler M. Potter	GROUP ACTIVITIES Writing Behavioral Objectives Redefining Units & Modules	MVR NG 02 NG 06 NG 03 NG 35
3:00 - 3:20		REPORTING SESSION	MVR N207

THURSDAY, JULY 7

8:00 - 8:20	T. Abramson A. Edsall	MAJOR & ENABLING OBJECTIVES	MVR N207
8:20 - 8:30	D. Zuzio	CONSIDER STUDENT NEEDS	
8:30 - 9:00		COFFEE BREAK	
9:00 - 11:00		GROUP ACTIVITIES Reconsidering Units & Modules Write Major Objectives (2 modules)	MVR NG 02 NG 06 NG 03 NG 35
11:00 - 11:45	*TT SED *CC	REPORT AND CRITIQUE MAJOR OBJECTIVES	MVR N207
11:45 - 12:45		LUNCH	
12:45 - 2:40		GROUP ACTIVITIES Writing Major Objectives	MVR NG 02 NG 06 NG 03 NG 35
EVENING SESSION 7:00 - 7:15	T. Abramson	ENTRY LEVEL COMPETENCY	
7:15 - 9:10		CRITIQUE - REWRITE MAJOR OBJECTIVES	
9:10 - 9:30		REPORTING SESSION	

FRIDAY, JULY 8

8:00 - 8:45	B. Thomas J. Roeder R. Braun R. Todd	PANEL DISCUSSION Psychomotor, Cognitive, Affective Domains	MVR N207
8:45 - 9:00	B. Thomas	SPECIFYING ENABLING OBJECTIVES	
9:00 - 9:15		COFFEE BREAK	
9:15 - 10:00		GROUP ACTIVITIES FOR 3 MAJOR OBJECTIVES WRITE 3 ENABLING OBJECTIVES	MVR NG 02 NG 06 NG 03 NG 35
10:00 - 11:00		Critique Major Objectives & Enabling Objectives	
11:00 - 11:30		REPORTING SESSION	MVR N207
11:30 - 12:15		LUNCH	
12:15 - 1:00		GROUP ACTIVITIES Prepare a model Major Obj.& associated Enabling Obj.	MVR NG 02 NG 06 NG 03 NG 35
1:00 - 1:45	*TT	REPORTING AND PRESENTATION SESSION MODEL MAJOR OBJECTIVES EACH AREA	MVR N207
1:45 - 2:00	T. Abramson	SUMMARY OF WEEKS ACTIVITIES	

MONDAY, JULY 11

8:00 - 8:45	T. Abramson A. Edsall	CRITERION REFERENCED MEASUREMENT	MVR Ampitheatre
8:45 - 9:05		COFFEE BREAK	
9:05 - 11:45		GROUP ACTIVITY Criterion referenced measurement development	MVR NG 02 NG 06 NG 03 NG 35
11:45 - 12:45		LUNCH	
12:45 - 1:30		REPORTING AND CRITIQUING CRM	MVR Ampitheatre
1:30 - 2:45		GROUP ACTIVITY CRM development	MVR NG 02 NG 06 NG 03 NG 35
2:45 - 3:15		REPORTING SESSION	
EVENING SESSION 7:00 - 7:45	K. Ormiston	ADDRESSING STUDENT OUTCOMES	
7:45 - 9:30		GROUP ACTIVITY CRM - Major Objective	

TUESDAY, JULY 12

8:00 - 8:40	SED **RC *TT	VALIDATING MAJOR OBJECTIVES PANEL DISCUSSION	MVR N207
8:40 - 9:00		COFFEE BREAK	
9:00 - 11:45		GROUP ACTIVITY CRM development	
11:45 - 12:30		LUNCH	
12:30 - 2:15		GROUP ACTIVITY Prepare Model CRMs	
2:15 - 3:15		REPORTING AND PRESENTATION OF MODEL CRMS	

*TT - Teacher Training - N. Acguaviva-Utica/Rome - Upper Division
J. Glenn-Utica/Rome - Upper Division
J. Lahren-SUC - Buffalo
J. Roeder-SUC - Buffalo
R. Todd-New York University

**RC - Regional Coordinators

WEDNESDAY, JULY 13

8:00 - 8:30	A. Edsall	STUDENT REPORTING SYSTEM
8:30 - 8:50		COFFEE BREAK
8:50 - 11:45		GROUP ACTIVITY Module Development and Refining
11:45 - 12:30		LUNCH
12:30 - 1:15		REPORTING SESSION
1:15 - 3:00		GROUP ACTIVITY Module Development and Refining
EVENING SESSION		
7:00 - 9:00		PROGRESS REPORT Refining Modules

THURSDAY, JULY 14

8:00 - 9:00	T. Abramson	ROLES OF SED, RESEARCH AND DEVELOPMENT UNITS
9:00 - 9:20		COFFEE BREAK
9:20 - 11:00		GROUP ACTIVITY Refining Modules
11:00 - 11:45		PROGRESS REPORT
11:45 - 12:30		LUNCH
12:30 - 2:30		GROUP ACTIVITY Refining Modules
EVENING SESSION		
7:00 - 9:00		POOL PARTY

FRIDAY, JULY 15

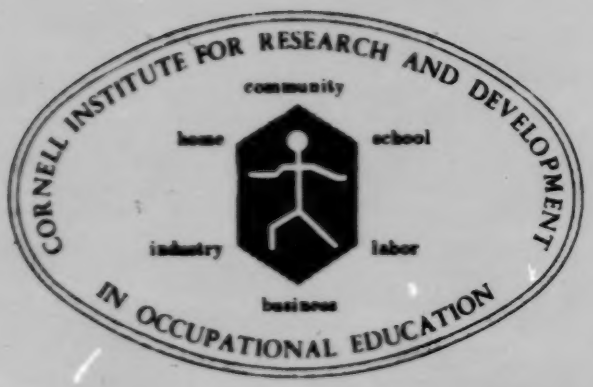
8:00 - 9:00	E. Cardish T. Trainers	PANEL DISCUSSION - 1977-78 SCHOOL YEAR
9:00 - 9:30		COFFEE BREAK
9:30 - 11:00		GROUP ACTIVITY Sequence - Units, Modules, Major Objectives
11:00 - 11:45		REPORTING SESSION
11:45 - 12:30		LUNCH
12:30 - 1:15		COMPLETE LIST OF UNITS, MODULES, MAJOR OBJECTIVES
1:15 - 1:45	T. Trainers	DEVELOP 77-78 WORK PLAN
1:45 - 2:15		REPORTING SESSION
2:15 - 2:30	Al Edsall	WRAP UP

ISSOE

INSTRUCTIONAL SUPPORT SYSTEM

FOR

OCCUPATIONAL EDUCATION IN NEW YORK STATE



DEVELOPMENT OF INSTRUCTIONAL SUPPORT SYSTEM

Prepared for Occupational Teachers Workshop at Cornell University

July 5 - 15 1977

Al Edsall

Education Department

Cornell University

FORWARD

A statewide occupational program as extensive as the program in New York State requires a comprehensive information management system for effective management control. An effective management system requires that education programs be evaluated against specific goals and objectives. Such a system would provide management data which enable state educational agencies to plan, monitor and redirect programmatic efforts more effectively in providing quality occupational education.

New York State Board of Regents Position Paper #11, Occupational Education, describes occupational education as a program which must be available to every secondary student. This position paper calls for the designing of secondary education systems to be "sufficiently open and flexible" to allow for changes in direction with a minumum of frustration and penalty.

An Instructional Support System utilizing the Modularized concept in Occupational Education Programs will facilitate movement by students across occupational curricula and movement between occupational and non-occupational curricula. According to Dr. Robert Seckendorf, Assistant Commissioner for Occupational Education, such a system should be capable of generating needed information about programs at the state level, provide data for regional planning and serve to analyze program accomplishments at the local level.

The Office of Occupational Education, State Education Department, Albany, New York, in March 1975 took preliminary steps to develop and implement an Instructional Support System for Occupational Education (ISSOE). This system is to provide informational support at the instructional level that is compatible with the comprehensive management information system for occupational education in New York State.

Phase I - Pilot Effort - 1975-1976

The Cornell Institute for Research and Development in Occupational Education in cooperation with the Office of Occupational Education, several local educational agencies, and a computer agency undertook the pilot effort in developing ISSOE during the summer of 1975. The operational goals of ISSOE, in simplistic terms, involved the imposition of a modularized performance based curriculum for individual students that can be systematically evaluated for

progress and achievement on a systems basis.

A pilot effort in the development of an Instructional Support System for Occupational Education (ISSOE) began during the summer of 1975 as the first phase. Automotive Mechanics and Office Training teachers began initial modular curriculum development during a summer workshop held at Cornell University. The Automotive Mechanics and Office Training teachers teamed up to develop a uniform format that utilized the performance mode. These teachers then utilized the modules developed and continued modular development in their local setting. They utilized the guidelines set during the summer workshop and were assisted by their respective ISSOE regional coordinators.

Phase II - Field Testing - 1976-1977

The field testing phase of the Instructional Support System for Occupational Education was conducted during the 1976-77 school year. After a critical review, modules developed and piloted during the 1975-76 year were revised during the 1976 summer workshop session. This revision brought the support system into sharper focus by shifting the emphasis of the effort to developing major objectives and criterion referenced measurement instruments. Field testing during 1976-77 substantiated the use of the major objectives in the Automotive Mechanics and Office Training areas as the essential component of the student reporting system. Major objectives can be utilized to produce student progress records, student employability profiles, and class progress charts. These can be used to evaluate local progress and provide a basis for decision-making by students, teachers, coulselors, and administrators at the local level. This data can also be aggregated in various configurations to provide information for decision-making by managers at local, regional, and state levels.

Two integral components of the ISSOE effort were also initiated during the 1976-77 year; 1) regional validation of major competencies needed by workers in the regions for the Automotive Mechanics and Office Training areas and 2) a pilot effort to determine the feasibility of a student reporting system producing student progress records, student employability profiles, and class progress charts.

City University initiated development in Building Industries and Food Service during 1976-77.

Phase III - 1977-78 - Transition, Evaluation, and Research

The 1977-78 will be a transition year during which the Institute for Research and Development in Occupational Education will provide leadership in transferring the ISSOE curriculum development support role to representatives of three teacher training institutions. The basic strategy to accomplish this is to conduct a summer instructional program for teachers new to the ISSOE effort. Teachers will receive for revising their present programs to the ISSOE mode at this summer workshop. Also during the summer workshop, representatives of the teacher training institutions will become acclimated to the ISSOE process to the extent that they will assume direction of the process in their designated state areas.

The primary role for the Institutes following the transition will be evaluative research. This role will be performed in cooperation with the State Education Department, teacher training institutions, local educational agencies, and other appropriate agencies. Basically it will involve assessing expanded curriculum efforts, the implementation of existing system components, business and industrial validation of employment competencies, and validation of emerging curriculum components.

ISSOE

CONCEPTS INVOLVED IN IMPLEMENTING ISSOE

Teacher Management System

The major aspects of the ISSOE teacher management system are: Major Objectives, Enabling Objectives, Criterion Referenced Measuring Instruments, Student Reporting System and the Coding System.

1. Major Objectives - Intended Learning Outcomes
   - Major competencies students are to learn (perform).
   - " " that are reported when completed.
   - " " that relate to jobs in the real world.
   - " " that can be clustered to D.O.T. job titles.
   - " " that can be utilized to show student progress.
   - " " that can be utilized to evaluate programs.
   - " " that can be utilized to determine resources needed.
2. Enabling Objectives (Instructional Phase)
   - Minor competencies needed to learn major objectives.
   - " " to be used to prepare daily instructional program.
   - " " used to develop instructional strategies.
   - " " to be used for diagnostic purposes.
3. Criterion-Referenced Measure

   Instrument to determine if major objective has been met. Used to certify that performance has been obtained.

Testing

ALL TESTING IS PERFORMANCE

(Paper & pencil testing vs. Performance Testing - ???????)

What is the best balance between test quality and economy of test administration? This is the crux of performance testing. The ISSOE test method (Criterion-Referenced Measure) requires performance identical (as close as possible) to that specified in the actual job.

The ISSOE effort must avoid settling for some probably irrelevant measure of task accomplishment.

Concepts for ISSOE

A. Utilize the performance mode for testing. This can be executed as:

1. psychomotor performance test.
2. valid cognitive test (Verbal: Oral or written).
3. Combination of 1 & 2.

B. Two purposes of testing as utilized by the ISSOE effort.

1. Major Objectives Testing

Purpose of certifying that competency has been attained (at this point in time).

- Teacher is best judge of this at the present time.
- Teachers' judgements will not vary significantly. (Competent teachers judging similar items) Congruence among test raters is high in the vocational area.

2. Enabling or Minor Objectives Testing

- Used to determine completion of minor competencies by student.
- Used to diagnose need for additional study, related study, remedial study, use of different learning strategies, etc. by student.

C. Student Advantages related to the ISSOE effort.

1. Help learners assume responsibility for their own learning process because the learner initiates the request to be tested.
2. Continuous feedback and many opportunities for successful experiences. This builds upon their strengths. (Do not test to exploit weaknesses.)

Test Scoring

The ISSOE test scoring activity matches or compares the test responses to a model in the work world. The work model is accepted as the correct model.

1. Either-or vs. acceptable

Many situations in the competency mode are extremely difficult to judge on an either-or basis. These situations should be judged more on an acceptable basis. In situations that need the acceptable-non-acceptable basis, the test developer should break the task related

responses down into elements so that the scorer can more readily make comparative judgements rather than make a test that will yield more measurable outcomes to serve the purpose of test validity.

2. Quality Scores

Identifying that a student has met a minimum competency level is not enough. A range of levels is necessary for evaluative purposes especially if the system is to be utilized to provide information for decision making.

A fine point range is suggested to give appropriate identification of the quality of the job. The following system was used in a pilot effort to test a student reporting system.

10. Outstanding performance - Performs assigned jobs in an accurate and correct manner. Follows prescribed procedure in every detail. Carefully observes all safety precautions. Uses all tools and equipment correctly. Completes operation in minimum length of time. After initial instruction, no assistance is required. Produces excellent quality work.
9. Very good performance - Follows accepted procedure in every detail. Completes work of high quality. Observes all safety precautions. Uses tools and equipment correctly. Completes operation in good time. Requires little help from instructor.
8. Average performance - Follows correct procedure in most details. Completes work of average quality. Observes major safety precautions. Uses tools and equipment correctly. Completes operation in average time. Requires occasional help.
7. Meets minimum requirements - Has some difficulty in following accepted procedures. Completes work of fair quality. Observes major safety precautions. Generally uses tools and equipment correctly. Requires considerable help.
6. Meets minimum requirements - Has difficulty following accepted procedures. Completes work of poor quality. Observes only the most obvious safety precautions. Shows tendency to misuse tools and equipment. Requires maximum time to complete work. Requires much help.

4. Student Reporting System

The ISSOE Student Reporting System has been devised to revolve around the reporting of major objectives (competencies) completed by each student. The complete system has not been instituted. The following suggests one approach to reporting student accomplishments (pp. 8, 9, 10).

The ISSOE major objectives makes it feasible to combine USOE coding and DOT job titles in the Student Reporting System. The system can provide Student Progress Records, Student Employability Profiles, and Class Progress Charts. The following are examples of this system which would require a one time input per student per objective by the teacher.

5. Coding

The first four digits identify the program area and course:

1732 - Automotive Mechanics
1432 - Office Training
17 - Building Industries
09 - Food Service
17 - Carpentry
01 - Conservation
07 - Health Assisting
04 - Retailing

The following pairs of digits represent unit, module, and major objective.

Automotive Mechanics

CODE:	1732	01	01	01
	Course	Unit	Module	Major Objective

Office Training

CODE:	1432	01	01	01
	Course	Unit	Module	Major Objective

ISSOE

STUDENT PERSONALIZED PROGRAM SELECTION

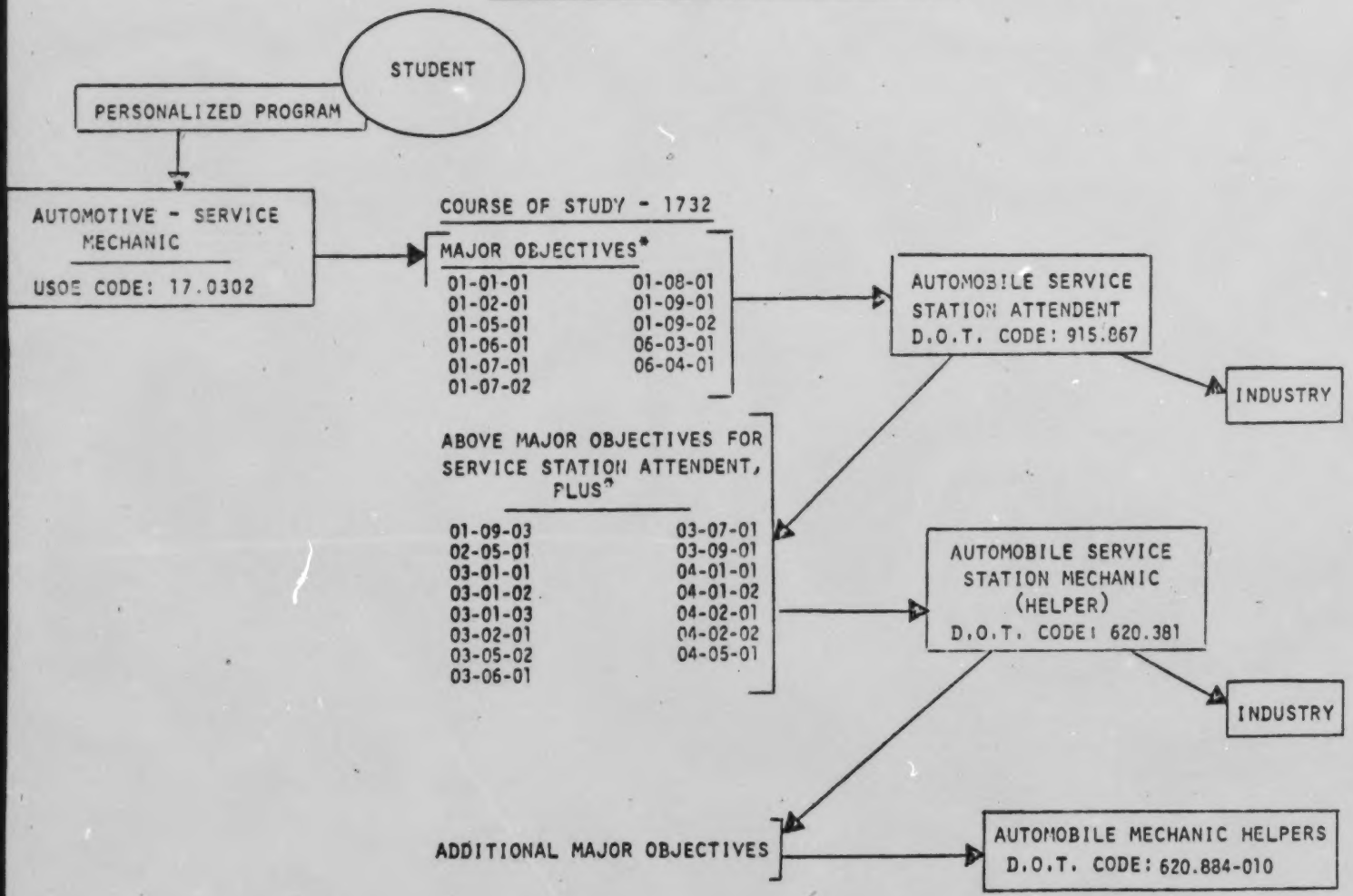


FIGURE 1: STUDENT PROGRESS RECORD & ACHIEVEMENT LEVEL REPORT

COURSE - AUTOMOTIVE MECHANICS - U.S.O.E. CODE 17.0302		
1. STUDENT NAME	JOHN SMITH	
2. D.O.T. CODE	Brakeman 620.281-034	
3. TASKS ACQUIRED & Q SCORE	1. R & R Brake Shoes 2. R & R Parking Brake Cable 3. R & R Disc Brake Caliper 4. R & R Brake Lines 5. R & R Wheel Cylinder 6. R & R Master Cylinder	9 7 6 9 8 9
4. CUM Q SCORE		8.0
5. TASKS REQUIRED TO QUALIFY & MODULE NO.	7. R & R Power Brake Assist 8. R & R Proportioning Valve 9. Overhaul Master Cylinder 10. Recondition Wheel Cylinder 11. Overhaul Disc Brake Caliper 12. Machine Brake Drum & Disc	

2/23/77

FIGURE 2: STUDENT EMPLOYABILITY PROFILE

COURSE - AUTOMOTIVE MECHANICS - U.S.O.E. CODE 17.0302		
1. STUDENT NAME	JOHN SMITH	
2. D.O.T. CODE	Brakeman 620.281-034	
3. TASKS ACQUIRED & CUM SCORE	1. R & R Brake Shoes	9
	2. R & R Parking Brake Cable	7
	3. R & R Disc Brake Caliper	6
	4. R & R Brake Lines	9
	5. R & R Wheel Cylinder	8
	6. R & R Master Cylinder	9
	7. R & R Power Brake Assist	8
	8. R & R Proportioning Valve	7
	9. Overhaul Master Cylinder	9
	10. Recondition Wheel Cylinder	10
	11. Overhaul Disc Brake Caliper	9
	12. Machine Brake Drum & Disc	10
4. CUM Q SCORE		8.42

2/23/77

CORNELL INSTITUTE FOR RESEARCH AND DEVELOPMENT IN OCCUPATIONAL EDUCATION
community · home · school · industry · labor · business

CAREER COMMENTARY

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Stone Hall
Phone: 607/256-6515

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A Report of Research of the Cornell University Agricultural Experiment Station

"VIEWPOINT"

Dr. Gene M. Winter
Acting Director

Modularized curriculum packages, specified learner outcomes, and computerized reporting systems are not new ideas to vocational educators. What is new and underway under the title of Instructional Support System for Occupational Education is a statewide effort that gives local teachers and curriculum coordinators the opportunity to develop a system using these concepts in ways they feel will facilitate and support the instructional process. The Office of Occupational Education, NY State Education Department, is providing statewide coordination of the effort and the research and development institutes at CUNY and Cornell are providing field services and support, but the tough developmental work is being done at the local school level under the leadership of the regional occupational education curriculum coordinator.

This issue of Career Commentary is devoted to ISSOE in an effort to communicate the concepts and directions of the project that is currently in its second year of activity. The ISSOE system is not now set in place but rather is evolving in a field development-test-refinement context that requires local teacher involvement. As one participant has said, "This may not be the most efficient way but it has possibilities to be the most effective way". We hope that this issue will have three types of impact: awareness for educators not currently involved in the project, understanding for those who have been on the periphery of local efforts, and a sense of pride for current participants in what they have accomplished to date.

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Kenneth A. Strike, Associate Professor, Philosophy of Education
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Helen L. Wardeberg, Professor of Education
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STATEWIDE IMPROVEMENT OF INSTRUCTION

A New Look at Instruction

Every once in a while the right people get together at the right time to come up with the right idea that takes shape and form and moves us forward one giant step. The development of an Instructional Support System for Occupational Education had all the elements of being an idea that had reached its time and was waiting to be found and used.

Instruction in our formalized school system makes many assumptions about the conditions and persons in the teaching-learning process. The "bottom line" in occupational education, however, is the determination that the instructor has taught competencies that students need in employment and the students are capable of performance at standards acceptable in the jobs and careers they seek. Up to now, the State has convened a group of experts in business, industry and education to determine what should be taught and left the implementation up to individual teachers. Unfortunately, "what should be taught" was decided only every five or ten years and there was always a time lag. The expanded programs and changing needs in occupations left new and experienced teachers with guides that needed updating constantly or, when no syllabus was available, with the task of developing his or her own guide from job analysis techniques. All this activity still did not assure that the student had learned, what the student had learned and who had learned what.

What is ISSOE

The Instructional Support System for Occupational Education recognizes the center of the teaching process as the teacher and the student. While only four programs in three occupational subject areas are being field-tested now, all occupational educators will be involved as the system moves throughout the State and into all subject and program areas in occupational education.

ISSOE helps teachers do the professional job for which they are responsible by assisting them in identifying the competencies to be taught in student performance terms at a standard or criterion recognized by employers. Student achievement is evaluated on a modular instructional segment of one to three weeks, large enough to challenge and small enough to control. The modular blocks of competencies build and cluster into units, the units into courses, and the courses into programs.

Student progress is reported on an individual basis on the modular level and competencies accumulate toward an employment preparation goal. As the student moves through a program, information on achievement will be available for counseling, further education, or employment, regardless of where or when the student learned the competencies or who taught them to him.

Projections

Just as employment needs change from region to region, so also do the competencies and performance levels needed for employment. Validating the instruction through employment placement and a regional advisory council's program and curriculum committee will provide feedback for possible changes. Competencies needed, but not

achieved, can receive new and effective support that may be reflected in the facilities and equipment needed, learning resources to be used, inservice teacher programs, aptitudes and abilities of student candidates, time to do the job, or other factors. The goal of ISSOE is: Better information for making decisions to change or not to change; what competencies are needed or not needed; and why students are succeeding or not succeeding.

Vocational education has been challenged to take a giant step for itself and the rest of education. It seems natural that this group would not only have the interest but the ability to deliver a system that generates direction as well as improvement. The process and products being developed currently involve programs in Auto Mechanics, Office Clerical, Foods, and Building Industries Trades in 19 BOCES and two cities. Al Edsall from the Institute for Research and Development in Occupational Education at Cornell, and Ted Abramson from CUNY Institute for Research and Development in Occupational Education are working closely with nine regional coordinators who meet after regular school sessions with nearly 200 teachers in the four program areas.

The field testing of ISSOE during this year will give clear indications of how fast and how far the reorganization of instruction is able to go. A ten-year projection for all programs in occupational education to be on ISSOE is not unreasonable. Many teachers have already identified competencies for student performance in their programs and occupational education traditionally identifies with employment needs. The basis for an idea whose time has come seems to depend on whether we are ready for the times.

BY Douglas T. Adamson, Director
Division of Occupational Education
Instruction, NY State Education Dept.

ISSOE: THE CIOE PERSPECTIVE

Curriculum theorists, such as Mauritz Johnson, recognize the field of curriculum as existing apart from instruction. Johnson defines curriculum as "a structured series of intended learning outcomes". Under this definition, the curriculum is composed of objectives but the instruction necessary to achieve these objectives is not specified. The ISSOE curriculum package is built upon Johnson's curriculum model; this system is designed to support the instruction rather than supplant the judgment of the instructor.

The Curriculum Package. The ISSOE curriculum package is a concise compendium of objectives leading to employability in the world of work. These objectives have been based on task analyses and the judgment of experienced teachers in each field. Major objectives are written in behavioral terms to facilitate a criterion-referenced testing system. Related objectives have been arranged in modules to facilitate instructional planning.

A module is a portion of the course which addresses related tasks drawn from occupational analysis expressed in performance terms. Each module contains one or more tasks and major objectives, enabling objectives, suggested instructional content and criterion-referenced measurement. A task is an activity which has a definite beginning and ending, and is performed within a limited period of time by an individual.

A major objective is a statement of what the student should be able to do, the conditions under which the task will be performed, and the standards for evaluating the performance. The achievement of a major objective is reported as a component of the student's employability profile. The criterion-referenced measurement is derived from the performance objectives and directly measures the individual student's ability to successfully complete the tasks identified in the module. The test items are performance-based and replicate as closely as possible the tasks as they would be evaluated in the world of work.

Accompanying each major objective is a brief listing of suggested demonstrations and points of information which the instructor may wish to employ to assist in meeting the major objective. This content is by no means a prescription for instruction; utilization is left to the discretion of the instructor.

By traditional definitions, the ISSOE package is not a complete curriculum. It does not attempt to specify all the experiences students should have under the guidance of teachers. The instructor can make allowances for individual differences or students with special needs or special abilities. This separation of curriculum and instruction seems particularly appropriate for occupational education.

ISSOE rests upon a performance-based modularized curriculum as a basis for reporting the achievement of individual students. A standardized format has been cooperatively developed that will provide compatibility for programs across the state both within program areas and across program areas. Statewide coordination of ISSOE is provided by the State Education Department, Office of Occupational Education. CIOE's role is to faciliate and support regional curriculum coordinators and teachers by the development of the curriculum packages that will operationalize the concept of a system to monitor, report and evaluate occupational education programs.

Status of Implementation. The implementation phase of the ISSOE project at CIOE is now well underway with increased staff and new participants. Dr. Alan Edsall and Dr. Martha Muncrief have been joined by Pellegrino (Duke) Zuzio from the Nassau County BOCES on a shared-time contract to work with participating teachers in the field. Duke has been a project participant and proponent enthusiast since its inception. He is a most welcome addition to the staff. William Kyros is working with the computerized reporting aspects of this project. His background and experience in computerization and systems analysis are invaluable to the implementation phase.

During the past year, CIOE staff, State Education Department representatives and participating LEA staff members completed the development phase of the ISSOE project. A two-week summer workshop for participating teachers was held at Cornell during July. At that time, curriculum packages for automotive mechanics and office training were critiqued and revised. The newer editions have been edited, printed and distributed.

Region IV has been established in the Broome-Tioga area with a potential of 20 to 25 participating teachers new to the project. In the three previously existing regions, expansion is rapid: Rochester is adding 40 teachers; Mid-Hudson, 25; and Long Island, 35.

The ISSOE System. The total ISSOE system is being designed to support and facilitate instruction by systematizing those auxiliary functions to instruction which are essential to occupational programs -- monitoring, reporting and evaluating. To serve these functions, ISSOE should be operational on several levels simultaneously: classroom, district, region and New York State as a whole.

Monitoring, reporting and evaluating are separate functions which may be performed for different purposes, at different times, by different individuals -- teachers, regional coordinators, occupational education directors, or State Education Department planners. However, these three functions all rest upon the same data base: the records of the individual student generated at the classroom level. When the achievement records of students are regionally consolidated by computer, a useful data base will be established incorporating new information and reporting information appropriate to the needs of the various educational users.

Local, regional or state agencies should be able to utilize this data to suit their various needs. This same data base has potential for use in planning, cost analysis and articulation between secondary and post-secondary occupational programs while at the same time assuming confidentiality of information through existing local, regional and State administrative relationships. However, we feel that in order for the system's potential to be fulfilled, ISSOE must first and best serve the instructional needs of teachers and the employability needs of students. For this reason the development of the system is being done by teachers guided by regional curriculum coordinators. This strategy is more costly but has a better chance for long-range success.

By Al Edsall and
Barbara Thomas

ISSOE: THE CUNY PERSPECTIVE

During a two-week summer workshop in Albany, teachers and curriculum coordinators developed modules, major objectives, a unit list and criterion referenced measures for Food Trades and Building Industries occupations. Within the ISSOE project, refinement and implementation of these materials will occur in three geographical areas: Orange/Dutchess, Erie/Buffalo, and the Capital District. Currently, these materials are being reviewed by CUNY staff -- Dr. Carol Tittle, project associate, Mr. Edward Kagen, Research Assistant; and a number of CUNY doctoral students. The review will result in suggested revisions and assessment procedures.

Three planning meetings with curriculum coordinators, two orientation meetings for administrative personnel, and two combination meetings - orientation/workshop/planning - for teachers have been held to date.

Activities in the next few months will consist of working with coordinators and teachers in the writing and utilizing of performance objectives, developing student performance criteria, designing implementation strategies, and identifying feedback procedures to be used with ISSOE materials under development. Dissemination activities will include presentations at appropriate meetings, contributions to newsletters and other publications.

Additionally, we hope to develop, with CIOE, an overall evaluation strategy for both phases of the ISSOE project as well as a common approach to assisting the coordinators in working to develop and implement the programs in their respective areas.

We look forward to continuing the process of interchange and sharing of ideas for objectives, assessments, teaching-learning strategies and curriculum revisions with personnel in all the regions.

By Ted Abramson, City University of New York

ISSOE: A Rebirth---The Teacher Perspective

When asked what they do for a living, many educators invariably reply, "I am a teacher!" Webster defines teacher as "one who teaches or one whose occupation is to instruct". How does one know when they have taught or given instruction? How can teachers be certain they have caused students to assimilate the knowledge and skills they attempt to transmit to them each day in our classrooms? The modular curriculum of the ISSOE system helps answer these questions. The uniform format and methodology of these curricula are a rebirth of the pedagogical processes commonly known as teaching. The simplicity of design and the ease of use have caused me to become a better organized instructor. Divisions in the format include: major objective, enabling objectives, and suggested instructional content.

Major Objective. Student evaluation is based on task-oriented performances. A criterion set forth within this objective allows the flexibility required by student needs and abilities. A teacher is able to "tailor" the course of study to the individual student. I have found three evaluative methods effective in meeting the challenge of accommodating each learner's ability: 1) a combination written and performance test for the exceptional learner; 2) a performance test for those who have difficulty with writing or word comprehension; and 3) an oral or visual identification examination for the handicapped or special needs student. A special needs learner might verbalize the name, purpose, operation and procedure of automotive parts or systems within the scope of a modified program or identify automotive parts and systems from shop and technical manuals. The factors that determine the course of evaluation for each student are varied. The important aspect is that the major objective is task oriented and each learner must meet the criterion within it for a teacher to report, "The learner has successfully completed the module".

Enabling Objectives. The learner is guided toward achievement of the major objective through enabling objectives which address the psychomotor, cognitive and affective domains of the learning process. Enabling objectives help accommodate various levels of ability. They are a means of individualizing the instructional processes thereby maximizing learner comprehension and success. The ISSOE system provides flexibility since all exercises included within enabling objectives do not have to be completed by the learner. For example, students may have previously learned skills and knowledge obtained from life's experiences which are then verified by performance on criterion testing.

Suggested Instructional Content. The suggested instructional content is the teacher's domain for developing the instructional strategy of his program. It is written in a topical outline and addresses the psychomotor, cognitive and affective domains. The suggested instructional content portion of the format allows the teacher to become a true "Learner-Manager" by developing, organizing, coordinating and implementing the learning processes as dictated by student needs and the educational environment. Work stations can be developed, tempered, modified, for the exceptional, normal and special needs learners.

Summary. The genuine excitement and enthusiasm for ISSOE is not without its problems, however. In order to safely and effectively test learners, a teacher or learner-manager needs assistance. The learner population should be a maximum of 20 for safety, efficiency and reality. With greater numbers, it becomes impractical to administer quality education in the automotive program. The realities of a larger class hinders organization while making program implementation difficult and exhausting. To better utilize a modularized curriculum in a team teaching concept, shop design should also be modularized; otherwise duplication of instructional programs result. To optimize management in a team teaching situation, a "lead learner-manager" or a "lead cluster teacher" is advisable to act as liaison between involved teachers and administrators.

The educational methods and processes described are not new. Educators are fully aware of these processes. The ISSOE system concept simply organizes the materials and resources on hand and eliminates a "seat of the pants" instructional mode. The ISSOE Systems Modularized Curriculum provides an opportunity for teachers to know when quality-effective instruction has occurred.

By Duke Zuzio, Nassau County BOCES

ISSOE: MODULAR SYSTEM FOR EDUCATION AND EMPLOYABILITY

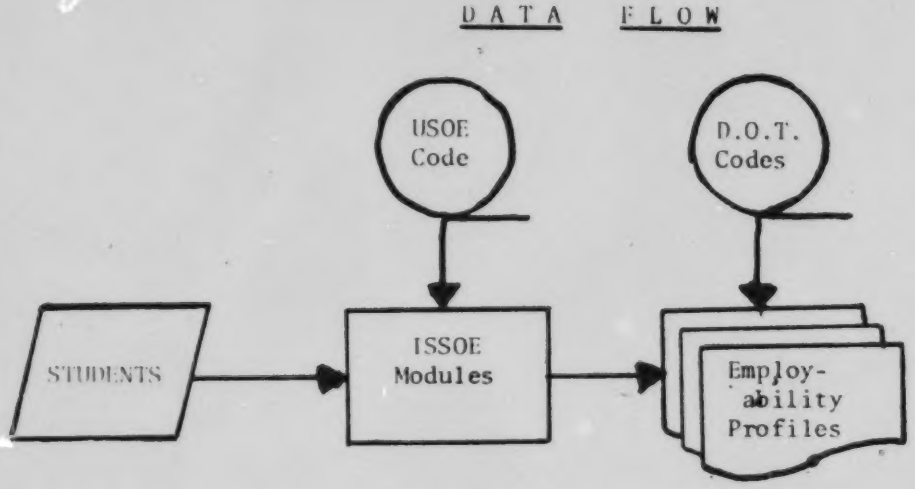
Modularized occupational education curricula under development as part of the Instructional Support System for Occupational Education by Cornell Institute for Occupational Education have been integrated into a statewide management information system. The project is sponsored by the Office of Occupational Education, New York State Education Department. The integration provides the means for the classroom teacher to continuously and systematically monitor instructional programs to ensure that students are learning skills relevant to the needs of business and industry.

There has been a steady decrease in the availability of jobs for the unskilled and semi-skilled and a simultaneous increase in the number of young people who are seen as unprepared to meet the demands of skilled employment in this age of super-technology. It is common that local unemployment rates are highest for persons 18-22 years old. The influx of highly sophisticated materials, hardware, software, and methodologies into business and industry have caused jobs to require more knowledge and skill at the entry level and a greater versatility in the worker over his productive lifetime. More than ever before these conditions require a medium by which educators can more easily communicate with private and public organizations about the relationship of what is being taught (intended learning outcomes) to what is required in business and industry in terms of specific job-skill capabilities.

With modularized curricula specifying job skills as intended learning outcomes and instructional methods by which they can be achieved, a basis for communication is at hand. The definitive skills which students can demonstrate upon graduation can be discussed more objectively with employers, advisory councils, and lay citizens to determine: 1) if skills are being taught that are obsolete, 2) if skills are not being taught which should be in order to keep up with technological changes, and 3) if acceptable levels of performance are being met.

When merged with other existing nationwide data banks, the process of redefining intended learning outcomes becomes more effective. An important part of the Instructional Support System for Occupational Education is being designed to utilize a national information base which can be related to modularized occupational programs as they are offered in New York State and which students can use to seek employment opportunities in areas where their acquired skills are needed.

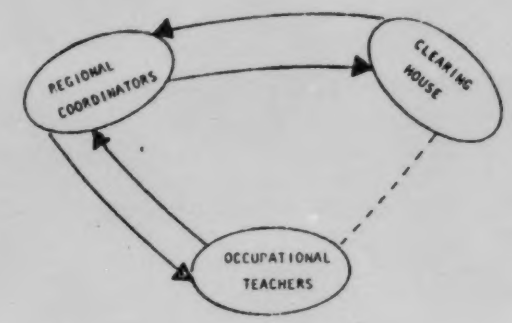
The system relates skills (delineated within curriculum modules) to the instructional program coding system of the United States Office of Education (USOE codes) and to the occupational coding system of the United States Department of Labor (D.O.T. codes). The USOE coding system is used to describe occupational programs of instruction by relating student enrollment to the occupations for which they are being trained, and with the skills which they are acquiring. The system design accommodates the diversity of program structures as they exist in the field by maintaining an accurate profile of skills by program areas even in cases where the cluster concept of skill training is used (See Figure). With this as an information base, a process is available for continuous monitoring, evaluation, revising and redefining employability profiles of graduates of occupational programs to ensure relevancy.



By William Kyros and Al Edsall

ISSOE STATEWIDE CURRICULUM DEVELOPMENT PROCESS

The major components of the ISSOE Statewide Curriculum Development System are the Occupational Teachers, the Regional Coordinators, and a Clearing House. These allow for continued involvement and input of all essential publics.



The major functions of each component are:

Teachers

1. Develop curriculum within guidelines
2. Test modules in local educational setting
3. Critique modules tested
4. Critique modules with colleagues in region (teaching same course)
5. Refer consensus of opinions to regional coordinator
6. Collectively act upon recommendations from other regions
7. Involve local trade or advisory committee
8. Continue inputs for updating

Regional Coordinators

1. Facilitate the curriculum development process by:
   a. Discuss distribution and assignment of modules to teachers to develop test and critique
   b. Arrange for teacher groups to review and act upon individual teacher critiques
   c. Assemble critique responses
   d. Transmit recommendations to Clearing House
   e. Review information sent from Clearing House with teachers in region
   f. Respond to requests from Clearing House

Clearing House

1. Act as facilitator for the curriculum process
2. Verification of major objective criteria relating to task performance
3. Verification of modules to DOT code
4. Collect and review responses from regional coordinators
5. Transmit items for action by other regions to the respective regional coordinators
6. Resolve differences to obtain consensus
7. Edit, print and disseminate curriculum output

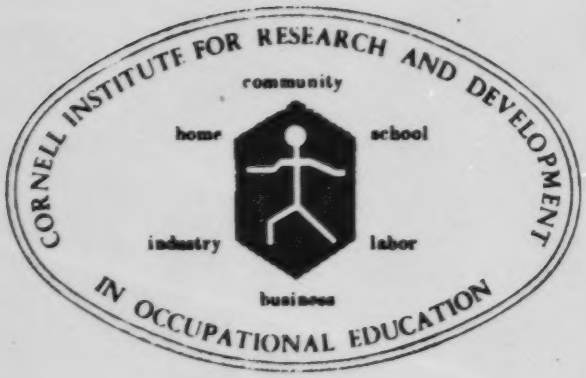
By Al Edsall

ISSOE

INSTRUCTIONAL SUPPORT SYSTEM

FOR

OCCUPATIONAL EDUCATION IN NEW YORK STATE



IN COOPERATION WITH

THE OFFICE OF OCCUPATIONAL EDUCATION

NEW YORK STATE EDUCATION DEPARTMENT

ALBANY, NEW YORK

CORNELL INSTITUTE FOR

RESEARCH AND DEVELOPMENT

IN OCCUPATIONAL EDUCATION

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Ithaca, New York, in concert with:

Batavia Public School District
Binghamton Public School District
Broome-Tioga BOCES
Canandaigua Public School District
Chenango Forks Central School District
Dansville Central School District
Dutchess County BOCES
Gates-Chili Central School District
Genesee-Wyoming BOCES
Greece Central School District
Harpursville Central School District
Livingston-Steuben-Wyoming BOCES
Maine-Endwell Central School District
Monroe County BOCES #1
Monroe County BOCES #2
Nassau County BOCES
Newark Central School District
Newark Valley Central School District
Orange-Ulster BOCES
Penfield Central School District
Penn Yan Central School District
Putnam-Westchester BOCES
Rochester Public School District
Rush-Henrietta Central School District
Sodus Central School District
Suffolk County BOCES #1
Suffolk County BOCES #2
Suffolk County BOCES #3
Sullivan County BOCES
Tioga Central School District
Union-Endicott Central School District
Wayne-Finger Lakes BOCES
West Irondequoit Central School District
Whitney Point Central School District

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John J. Fiore, Sr., Dutchess County BOCES, Region 3 - Mid-Hudson

Richard Rivers, Broome-Tioga BOCES, Region 8 - Southern Tier East

Michael DiVito, Rochester Public Schools, Region 10 - Gennessee-Finger Lakes

ISSOE AUTOMOTIVE MECHANICS TEACHERS

REGION 1 - NASSAU-SUFFOLK

Frank Ambrico, Nassau BOCES
Roger Annicelli, Nassau BOCES
Arthur Baisley, Nassau BOCES
Mel Baum, Suffolk BOCES #2
Joseph Capalino, Suffolk BOCES #3
Louis Cassistre, Suffolk BOCES #2
Sebastian Castelli, Suffolk BOCES #1
Steve Celeste, Suffolk BOCES #1
Albert Clerico, Nassau BOCES
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Alfred Gerner, Jr., Suffolk BOCES #3
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Fred Gramet, Nassau BOCES
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Joseph Grinere, Suffolk BOCES #3
Earl King, Nassau BOCES
Santo Licata, Nassau BOCES
John Luger, Suffolk BOCES #3
Stephen Mercaldo, Suffolk BOCES #3
James Merget, Suffolk BOCES #3
James Mullen, Nassau BOCES
Alex Nuzen, Suffolk BOCES #3
Edwin O'Connor, Suffolk BOCES #1
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Stanley Rockefeller, Nassau BOCES
Michael SanFilippo, Suffolk BOCES #3
Glen Scherrer, Nassau BOCES
Anthony Spadaro, Nassau BOCES
Robert Stampf, Nassau BOCES
Sanford Sturm, Nassau BOCES
Richard Trabulsi, Nassau BOCES
James Tyler, Suffolk BOCES #1
Lewellyn Ward, Nassau BOCES

REGION 3 - MID-HUDSON

Edward Bennett, Orange-Ulster BOCES
James Curtis, Orange-Ulster BOCES
George Frasca, Putnam-Westchester BOCES
Edwin Hard, Putnam-Westchester BOCES
Eugene Knoebel, Putnam-Westchester BOCES
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Philip Snedeker, Sullivan County BOCES
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REGION 8 - SOUTHERN TIER EAST

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Angelo Gentile, Broome-Tioga BOCES
William Greene, Broome-Tioga BOCES
Ken Maas, Broome-Tioga BOCES
Terry Mallow, Broome-Tioga BOCES
Wayne VanWie, Broome-Tioga BOCES

REGION 10 - GENESEE-FINGER LAKES

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Dean Cook, Williamson Education Center
Robert Donato, Monroe BOCES #1
Ed Engel, Genesee-Wyoming BOCES
Milton Hale, Monroe BOCES #2
Elton Hellert, Monroe BOCES #2
Arland Isaman, Edison Tech, Rochester
Eugene Kahl, Wayne-Finger Lakes BOCES
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Ron Peterson, Livingston-Steuben, Wyoming BOCES
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Richard Starowitz, Monroe BOCES #2
Roger Young, Livingston-Steuben-Wyoming BOCES
Ted Zajac, Monroe BOCES #1

POTENTIAL EXPANSION AREAS

FOR

THE ISSOE SYSTEM 1976-1977 EFFORTS

FUNDING AGENCY	REGION	REGIONAL PARTICIPATION	PROGRAM AREAS
Nassau BOCES	I	Nassau BOCES Suffolk BOCES #1 & #3	Automotive Mechanics
Dutchess BOCES Orange BOCES	II	Dutchess County BOCES Putnam-Westchester BOCES Ulster County BOCES Orange County BOCES Sullivan County BOCES Rockland County BOCES	Automotive Mechanics & Office Training & Building Industries & Food Services
City of Rochester	III	Rochester City Schools Greece-Arcadia HS Newark Central HS North Rose-Wolcott HS Sodus Central HS West Irondequoit HS Monroe BOCES #1 & #2 Genesee-Wyoming BOCES Wayne-Finger Lakes BOCES Livingston-Steuben-Wyoming BOCES	Automotive Mechanics & Office Training
Broome-Delaware-Tioga BOCES	IV	Broome-Delaware-Tioga BOCES	Automotive Mechanics & Office Training
City of Buffalo		Buffalo City Schools Erie County BOCES #1	Building Industries & Food Services
Hamilton-Fulton-Montgomery BOCES		Hamilton-Fulton-Montgomery BOCES Albany-Schenectady-Schoharie BOCES	Building Industries & Food Services
Warren-Washington-Hamilton-Essex BOCES		Warren-Washington-Hamilton-Essex BOCES	Building Industries & Food Services

ISSOE

REGIONAL COORDINATORS

BROOME-DELAWARE-TIOGA BOCES	RICHARD RIVERS
BUFFALO CITY SCHOOLS	LEONARD NEUREUTHER
DUTCHESS BOCES	JOHN J. FIORE, SR.
ERIE BOCES #1	DAVID HILL
HAMILTON-FULTON-WASHINGTON BOCES	ADRIENNE VOGRIN
NASSAU BOCES	HERBERT IGNATOFF
ORANGE-ULSTER BOCES	HAROLD DWORETZKY
ROCHESTER CITY SCHOOLS	MICHAEL DIVITO
WARREN-WASHINGTON-HAMILTON-ESSEX BOCES	FRED CHAMPAGNE

GLOSSARY

COURSE:

A State-approved course of study. The course consists of modules on instruction essential to the acquisition of competencies expected by the world of work.

UNIT:

A portion of the course which consists of a logical clustering of modules of instruction.

MODULE:

A portion of the course which addresses related tasks drawn from occupational analysis expressed in performance terms. Each module contains one or more tasks and major objectives, enabling objectives, suggested instructional content and criterion-referenced measurement.

TASK:

An activity which has a definite beginning and ending, and is performed within a limited period of time by an individual. One or more tasks are included in each module.

MAJOR OBJECTIVE:

A statement of what the student should be able to do, the conditions under which the task will be performed, and the standards for evaluating the performance. The achievement of a major objective will be reported as a component of the student's employability profile.

ENABLING OBJECTIVE:

A subordinate objective which describes in performance terms a cognitive, affective, and/or psychomotor skill which the student will need to accomplish the major objective. Achievement of an enabling objective is not reported; performance of and recording of this achievement is left to the discretion of the instructor.

SUGGESTED INSTRUCTIONAL CONTENT:

A brief listing of suggested demonstrations and points of information which the instructor may wish to employ to assist the student in meeting the major objective.

CODE:

The first four digits, 1732, identify the program area and course -- auto mechanics. The following pairs of digits represent unit, module and major objective.

1732	01	01	01
Course	Unit	Module	Major Objective

CRITERION-REFERENCED MEASUREMENT:

Criterion-referenced measurement is derived from the performance objectives and directly measures the individual student's ability to successfully complete the tasks identified in the module. The test items are performance-based and replicate as closely as possible the tasks as they would be evaluated in the world of work.

INSTRUCTIONAL SUPPORT SYSTEM

FOR

OCCUPATIONAL EDUCATION

AUTO MECHANICS CURRICULUM

This performance-based system has been written and revised by auto mechanics teachers with the assistance of CIOE staff. Teachers have participated in workshops at Cornell for two successive summers; the intervening year has been used for further module development, field-tests and refinement in cooperation with regional curriculum coordinators.

This system suggests a pattern of organization for a course in auto mechanics. Although it suggests what to teach, it does not tell how it should be taught or provide lesson plans for teachers. Individual activities and teaching methods are not prescribed but left to the discretion of the teacher.

The ISSOE curriculum in auto mechanics, as in other occupational areas, consists of several inter-dependent components: units, modules, tasks, code, major objectives, enabling objectives, suggested instructional content and criterion-referenced measurements. These terms are defined in the glossary which follows.

Because the system is performanced-based, the criterion-referenced measurement of student achievement is critical. Standards of performance for each task have been set; the student is evaluated on his/her ability to meet the standard as described in the major objective not on his/her performance in relation to others. No normative data is included. In the field of auto mechanics, the student is expected to complete the task to meet standards that are acceptable to the trade in terms of quality of work, procedures, use of supplies, tools and equipment and safety precautions. The flat-rate manual has been employed as a basis for productivity standards. This curriculum is directed toward achieving employability for the student by evaluating performance in the school setting as it is evaluated in the world of work.

I S S O E

MODULAR CURRICULUM DEVELOPMENT

FOR OCCUPATIONAL EDUCATION

AUTOMOTIVE SERVICE OCCUPATIONS

AUTOMOTIVE MECHANICS COURSE

UNIT 01: INTRODUCTION TO AUTO MECHANICS

MODULE:

01. Shop Procedures
02. Personal Safety
03. Job Requirements
04. Job Opportunities
05. Hand Tools
06. Power Equipment
07. Lubrication Service
08. Wheel Bearing
09. Tire Service

UNIT 02: CHASSIS AND FRAME

MODULE:

01. Drum Brakes
02. Disc Brakes
03. Hydraulics
04. Suspension
05. N.Y.S. Inspection
06. Alignment
07. Steering

UNIT 03: POWER PLANT

MODULE:

01. Liquid Cooling
02. Carburetor
03. Storage & Delivery
04. Fuel Injection
05. Primary Circuit
06. Secondary Circuit
07. Tune Up & Diagnosis
08. Electronic Ignition
09. Exhaust System
10. Emission Control
11. Short Block
12. Valve Systems

UNIT 04: ELECTRICAL

MODULE:

01. Lights
02. Storage Battery
03. Charging System
04. Starting System
05. Instruments
06. Power Accessories

UNIT 05: DRIVE LINE

MODULE:

01. Drive Shaft
02. Rear Assembly
03. Clutch Assembly
04. Manual Transmission
05. Automatic Transmission

UNIT 06: BODY MECHANICAL

MODULE:

01. Body Adjustments
02. Glass Adjustments
03. Interior Appearance
04. Exterior Appearance
*05. Energy Absorbing Bumper

UNIT 07: ACCESSORIES

MODULE:

01. Heater
02. Air Conditioner
03. Speed Control Devices
04. Rear Defogger/Defroster

*To Be Completed

CODE:	1732	01	01	01
	Course	Unit	Module	Major Objective

COURSE: State-approved course of study; the course consists of modules of instruction essential to the acquisition of competencies expected by the world of work.

UNIT: A logical clustering of related modules of instruction.

CODE: The first four digits, 1732 (A.M.) and 1433 (O.T.), identify the program area and course. The following pairs of digits represent unit, module and major objective.

MODULE: A portion of the course which addresses related tasks drawn from occupational analysis expressed in preformance terms. Each module contains one or more tasks and major objectives, enabling objectives, suggested instructional content and criterion-referenced measurement.

TASK: An activity which has a definite beginning and ending, and is performed within a limited period of time by an individual. One or more tasks are included in each module.

MAJOR OBJECTIVE

A statement of what the student should be able to do, the conditions under which task will be performed, and the standards for evaluating the performance. The achievement of a major objective will be reported as a component of the student's employability profile.

A-55

ENABLING OBJECTIVES

A subordinate objective which describes in performance terms a cognitive, affective, and/or psychomotor skill which the student will need to accomplish the major objective. Achievement of an enabling objective is not reported; performance and recording of this achievement is left to the discretion of the instructor.

SUGGESTED INSTRUCTIONAL CONTENT

A brief listing of suggested demonstrations and points of information which the instructor may wish to employ to assist the student in meeting the major objective.

COURSE:

UNIT:

CODE:

MODULE:

TASK:

MAJOR OBJECTIVE

FORMAT FORM FOR

AUTOMOTIVE MECHANICS AND OFFICE TRAINING

ENABLING OBJECTIVES	SUGGESTED INSTRUCTIONAL CONTENT

CRITERION-REFERENCED MEASUREMENT SHEET
(AUTOMOTIVE MECHANICS)

CHECK ONE ONLY

NAME _____ DATE _____ MET MAJOR OBJECTIVE []

TEACHER _____ CLASS _____ NEEDS FURTHER INSTRUCTION []

MODULE: _____ REMARKS:

MAJOR OBJECTIVE:

Did student, when applicable:

1. Observe safety standards? _____
2. Use trade acceptable standards? _____
3. Meet manufacturer's specs? _____
4. Use proper procedure? _____
5. Use proper tools? _____
6. Observe good housekeeping practices? _____
7. Complete necessary paper work? _____
8. Complete the job in an acceptable time period based on flat rate time? _____

A-57

COURSE: Auto Mechanics
UNIT: INTRODUCTION TO AUTO MECHANICS
CODE: 17320107

MODULE: LUBRICATION SERVICE 1-7-8
TASK: Change Engine Oil and Filter

MAJOR OBJECTIVE

01 Given an operational engine with oil, oil filter, necessary tools and materials, the student will:

- . drain the engine oil
- . remove old oil filter
- . prepare gaskets and gasket surfaces
- . install new engine oil and oil filter
- . check for leaks
- . complete the task in twice the flat rate time.

ENABLING OBJECTIVES	SUGGESTED INSTRUCTIONAL CONTENT
Given an operational engine with oil, oil filter, necessary tools and materials, the student will: . identify the various types and grades of oil . identify the types of oil filters . identify the various types and uses of drain plugs . display an understanding of how to replace a stripped oil pan drain plug.	Demonstration: . Draining and refilling crankcase . Removing oil filter . Using special tools . Preparing and installing new oil filter Information: . Types of oils . Types of oil filters . Special tools . Types of drain plugs . Use of manuals

CRITERION-REFERENCED MEASUREMENT SHEET

NAME _____ DATE _____

TEACHER _____ CLASS _____

MODULE: LUBRICATION SERVICE 17320107

MAJOR OBJECTIVE: 01

Given an operational engine with oil, oil filter, necessary tools and materials, the student will:

. drain the engine oil
. remove old oil filter
. prepare gaskets and gasket surfaces
. install new engine oil and oil filter
. check for leaks
. complete the task in twice the flat rate time.

CHECK ONE ONLY

MET MAJOR OBJECTIVE []

NEEDS FURTHER INSTRUCTION []

REMARKS:

A-59

Did student, when applicable:

1. Observe safety standards? _____
2. Use trade acceptable standards? _____
3. Meet manufacturer's specs? _____
4. Use proper procedure? _____
5. Use proper tools? _____
6. Observe good housekeeping practices? _____
7. Complete necessary paper work? _____
8. Complete the job in an acceptable time period based on flat rate time? _____

COURSE: Auto Mechanics
UNIT: INTRODUCTION TO AUTO MECHANICS
CODE: 17320107

MODULE: LUBRICATION SERVICE 1-7-9
TASK: Lubricate Chassis

MAJOR OBJECTIVE

02 Given a car, lift, high pressure chassis lubricator, necessary tools and lubrication manuals, the student will:

- . lubricate the car's chassis and related body parts as indicated in the lubrication manuals
- . visually inspect all points to be certain they are properly lubricated
- . check all fluid levels and bring all fluids up to proper level
- . accurately complete the necessary paperwork
- . complete the task according to mfg. specs., in twice the flat rate time.

A-60

ENABLING OBJECTIVES

Given a car, lift, lubrication manual, necessary tools and equipment, the student will:

- . demonstrate an understanding as to the use of lubrication manuals
- . identify the various types of lubricants
- . identify the various types of lubricating equipment
- . list the proper lubrication procedure
- . identify the various lubrication points, both chassis and body
- . identify and complete the supporting paperwork.

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SUGGESTED INSTRUCTIONAL CONTENT

Demonstration:
- . Proper procedure for lubricating a car's chassis and body parts
- . Location of various filler plugs
- . Location of various level indicators

Information:
- . Various level checking procedures
- . Types of lubricants
- . Types of lubrication equipment
- . Use of lubrication manuals
- . Lubrication procedures
- . Related safety
- . Supporting paperwork

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CRITERION-REFERENCED MEASUREMENT SHEET

NAME _____ DATE _____

TEACHER _____ CLASS _____

MODULE: LUBRICATION SERVICE 17320107

MAJOR OBJECTIVE: 02

Given a car, lift, high pressure chassis lubricator, necessary tools and lubrication manuals, the student wi l:

- . lubricate the car's chassis and related body parts as indicated in the lubrication manuals
- . visually inspect all points to be certain they are properly lubricated
- . check all fluid levels and bring all fluids up to proper level
- . accurately complete the necessary paperwork
- . complete the task according to mfg. specs., in twice the flat rate time.

CHECK ONE ONLY

MET MAJOR OBJECTIVE []

NEEDS FURTHER INSTRUCTION []

REMARKS:

A-61

Did student, when applicable:

1. Observe safety standards? _____
2. Use trade acceptable standards? _____
3. Meet manufacturer's specs? _____
4. Use proper procedure? _____
5. Use proper tools? _____
6. Observe good housekeeping practices? _____
7. Complete necessary paper work? _____
8. Complete the job in an acceptable time period based on flat rate time? _____

COURSE: Auto Mechanics
UNIT: INTRODUCTION TO AUTO MECHANICS
CODE: 17320108

MODULE: WHEEL BEARING SERVICE 1-8-10
TASK: Repack Front Wheel Bearings

MAJOR OBJECTIVE

01 Given a car or an assembled front wheel, drum, wheel bearings, spindle unit and necessary tools and equipment, the student will:

- . remove the wheel and drum assembly in proper order
- . remove, clean and inspect wheel bearings and seal to mfg. specs.
- . repack wheel bearings to instructor's satisfaction (trade standards)
- . replace front wheel bearings, drum and wheel assembly to mfg. specs.
- . complete the task according to mfg. specs., in twice the flat rate time.

ENABLING OBJECTIVES

Given a car or an assembled front wheel, drum, wheel bearings, spindle unit and necessary tools and equipment, the student will:

- . describe the use of a torque wrench
- . identify the various types of wheel bearings and seals
- . demonstrate wheel bearing repacking methods
- . demonstrate an understanding of wheel bearing tightening procedures.

SUGGESTED INSTRUCTIONAL CONTENT

Demonstration:
- . Methods of repacking bearings
- . Using air pressure to clean bearings

Information:
- . Type of lubricants
- . Purpose and types of wheel bearings and seals
- . Wheel bearing adjustments
- . Special tools
- . Safety, grease on brake lining

CRITERION-REFERENCED MEASUREMENT SHEET

CHECK ONE ONLY

MET MAJOR OBJECTIVE [ ]

NEEDS FURTHER INSTRUCTION [ ]

NAME _____ DATE _____

TEACHER _____ CLASS _____

REMARKS:

MODULE: WHEEL BEARING SERVICE 17320108

MAJOR OBJECTIVE: 01

Given a car or an assembled front wheel, drum, wheel bearings, spindle unit and necessary tools and equipment, the student will:

- remove the wheel and drum assembly in proper order
- remove, clean and inspect wheel bearings and seal to mfg. specs.
- repack wheel bearings to instructor's satisfaction (trade standards)
- replace front wheel bearings, drum and wheel assembly to mfg. specs.
- complete the task according to mfg. specs., in twice the flat rate time.

Did student, when applicable:

1. Observe safety standards? _____
2. Use trade acceptable standards? _____
3. Meet manufacturer's specs? _____
4. Use proper procedure? _____
5. Use proper tools? _____
6. Observe good housekeeping practices? _____
7. Complete necessary paper work? _____
8. Complete the job in an acceptable time period based on flat rate time? _____

COURSE: Auto Mechanics
UNIT: INTRODUCTION TO AUTO MECHANICS
CODE: 17320109

MODULE: TIRE SERVICE 1-9-12
TASK: Repair A Leaking Tire

MAJOR OBJECTIVE

02 Given a leaking tire, tubeless or tube type, tubeless tire plugs or patches and necessary tools and equipment, the student will:

. repair a leaking tire
. inflate tire to mfg. specs. with no air leaks.

ENABLING OBJECTIVES	SUGGESTED INSTRUCTIONAL CONTENT
Given a leaking tire, tubeless or tube type, tubeless tire plugs or patches and necessary tools and equipment, the student will: . inspect tire for leaks . properly dismount and mount tire from rim . demonstrate repairing a tire tube . demonstrate repairing a tubeless tire . inspect tire casing for defects . R & R tubeless tire valve assembly . inflate tire properly.	Demonstration: . Installing plugs and patches . Tire machine operation . Using test tank . Inspection of tire . Using bead expander Information: . Types of tire plugs and patches . State inspection regulations concerning tires . Properly inflating tires . Related safety

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CRITERION-REFERENCED MEASUREMENT SHEET

NAME _____ DATE _____

TEACHER _____ CLASS _____

MODULE: TIRE SERVICE 17320109

MAJOR OBJECTIVE: 02

Given a leaking tire, tubeless or tube type, tubeless tire plugs or patches and necessary tools and equipment, the student will:

. repair a leaking tire

. inflate tire to mfg. specs. with no air leaks.

CHECK ONE ONLY

MET MAJOR OBJECTIVE []

NEEDS FURTHER INSTRUCTION []

REMARKS:

Did student, when applicable:

1. Observe safety standards? _____
2. Use trade acceptable standards? _____
3. Meet manufacturer's specs? _____
4. Use proper procedure? _____
5. Use proper tools? _____
6. Observe good housekeeping practices? _____
7. Complete necessary paper work? _____
8. Complete the job in an acceptable time period based on flat rate time? _____

INSTRUCTIONAL SUPPORT SYSTEM

FOR

OCCUPATIONAL EDUCATION

OFFICE TRAINING CURRICULUM

This performance-based system has been written and revised by business and office teachers with the assistance of CIOE staff. Teachers have participated in workshops at Cornell for two successive summers; the intervening year has been used for further module development, field-tests and refinement in cooperation with regional curriculum coordinators.

This system suggests a pattern of organization for a course in office training. Although it suggests what to teach, it does not tell how it should be taught or provide lesson plans for teachers. Individual activities and teaching methods are not prescribed but left to the discretion of the teacher.

The ISSOE curriculum in office training, as in other occupational areas, consists of several inter-dependent components: units, modules, tasks, code, major objectives, enabling objectives, suggested instructional content and criterion-referenced measurements. These terms are defined in the glossary which follows.

Because the system is performance-based, the criterion-referenced measurement of student achievement is critical. Standards of performance for each task have been set; the student is evaluated on his/her ability to meet the standard as described in the major objective not on his/her performance in relation to others. No normative data is included. This curriculum is directed toward achieving employability for the student by evaluating performance in the school setting as it is evaluated in the world of work.

I S S O E

MODULAR CURRICULUM DEVELOPMENT

FOR OCCUPATIONAL EDUCATION

OFFICE OCCUPATIONS

OFFICE TRAINING COURSE

UNIT 01: BASIC SKILLS REFRESHER

MODULE:

01. English Refresher
02. Arithmetic Refresher

UNIT 02: COMMUNICATION SKILLS

MODULE:

01. Oral Communication
02. Written Communication
03. Mail Handling

UNIT 03. WORD PROCESSING

MODULE:

01. Production Typing
02. Magnetic Keyboard
03. Machine Transcription

UNIT 04: FILING AND RETRIEVAL

MODULE:

01. Alphabetic Filing
02. Numeric, Geographic and Subject Filing
03. Modern Filing Systems and Equipment

UNIT 05: REPROGRAPHICS

MODULE:

01. Spirit Duplication
02. Stencil Duplication
03. Offset Duplication
04. Direct Reproduction
05. Reprographics Decision Making

UNIT 06: ADDING AND CALCULATING MACHINES

MODULE:

01. Adding Machines
02. Calculating Machines

UNIT 07: FINANCIAL AND RECORDKEEPING SYSTEMS

MODULE:

01. Petty Cash Fund
02. Payroll Procedures
03. Banking Procedures
04. Inventory
05. Purchasing and Sales Documents

UNIT 08: DATA PROCESSING

MODULE:

*01. Data Processing Systems
*02. Keypunching

UNIT 09: EMPLOYABILITY

MODULE:

01. Employment Procedures
02. Career Dynamics

*Not completed

MODULE:

TASK(S):

NAME: _____

SECTION: _____

DATE: _____

CRITERION-REFERENCED MEASUREMENT

(OFFICE TRAINING)

Criterion-referenced measurement is derived from the performance objectives and directly measures the individual student's ability to successfully complete the tasks identified in the module. The test items are performance-based and replicate as closely as possible the tasks as they would be evaluated in the world of work.

COURSE: Office Training
UNIT: Communication Skills
CODE: 14330203

MODULE: Mail Handling
TASK: 01 Process incoming and outgoing communications and materials

MAJOR OBJECTIVE

01 Given a written test the student will demonstrate the ability to expedite delivery of communications and materials by completing the test with 80% accuracy within 30 minutes.

ENABLING OBJECTIVES

Incoming mail
The student will sort, open, date-stamp, check, and route incoming mail.

Outgoing mail
The student will check and prepare correspondence and materials for outgoing mail.

Maintain records
The student will keep necessary correspondence records.

Mail classes and services
The student will identify classes of mail and special services of the postal office and indicate appropriate use of each.

Shipping services
The student will identify shipping services and indicate appropriate use of each.

Postal references
The student will use postal references.

Postal equipment
The student will identify office equipment used to prepare mail for posting.

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SUGGESTED INSTRUCTIONAL CONTENT

Vocabulary
correspondence/materials register
under separate cover
opening, scanning, annotating, routing mail
classes of mail
girth
parcel post zones
special delivery
registered mail
certified mail mailgram
return receipt requested
special handling
bulk rate
sorting, bundling, facing
optical scanner
zip code
zip code directory
mass mailings
chain feeding
postal scale
postage meter
addressograph
shipping guides and services
terminal
mailing lists
international and domestic mail

A-69

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MODULE: Mail Handling

TASK(S): 01 Process incoming and outgoing communications and materials

NAME: _____

SECTION: _____

DATE: _____

CRITERION-REFERENCED MEASUREMENT

1. You are asked to prepare the following items for mailing. In order to correctly determine mailing cost of each item, you must determine the class of mail to which the item belongs and decide which special services you require. Indicate the class of mail for each item by writing a letter from Column I in the space provided; indicate any special service(s) by writing the appropriate letter(s) from those listed in Column II.

Column I - Classes of Mail	Column II - Special Services
a) first class	f) special delivery
b) second class	g) special handling
c) third class	h) registered
d) fourth class (parcel post)	i) certified
e) mixed	j) insured
	k) C.O.D.

		Column I	Column II
1.	Final notice of overdue payment--proof of delivery	_____	_____
2.	Carbon copy of letter--regular delivery	_____	_____
3.	Company postcard confirming appointment	_____	_____
4.	Company catalog weighing 3 oz.	_____	_____
5.	Shampoo sample, weighing 1 oz.	_____	_____
6.	Signed contract	_____	_____
7.	Stock certificates valued at $5,000	_____	_____
8.	Copy of SEVENTEEN magazine	_____	_____
9.	Mail order merchandise weighing 2 lbs. not paid for in advance	_____	_____
10.	Book with bill attached to package	_____	_____
11.	Letter to be delivered to addressee immediately upon receipt at addressee's post office	89	_____

2-3-2

II. For each of the following situations, select the term or phrase which best completes the statement, and write the letter which precedes it in the space provided.

_____ 1. Your employer neglected to sign a check requiring his signature attached to an outgoing letter. You would:

a. sign his name
b. send it unsigned
c. return it to him later

_____ 2. You are enclosing material in an envelope which seems unusually heavy. Correct postage can be determined:

a. on an addressograph machine
b. on a postage scale
c. by calling the post office

_____ 3. A customer reports he did not receive a contract. Your records indicate it was mailed. Which of the following Post Office services would you employ?

a. certified mail
b. recall mail
c. trace mail

_____ 4. To locate the zip code of the State Education Department, located on Washington Avenue, Albany, NY, in the ZIP Code Directory, the first item you would locate is:

a. Albany
b. New York
c. Washington Avenue

_____ 5. On scanning an incoming letter, you note that the enclosure indicated does not accompany the letter. You would:

a. let your boss handle it
b. note the omission on the letter
c. call the police

_____ 6. By accident you open a personal letter addressed to your employer. You should:

a. reseal or tape the letter and make no mention of your mistake
b. discard the letter because it is non-business related
c. replace the letter in the envelope and attach a note explaining your error

2-3-3

_____ 7. The most efficient way of circulating an incoming routine memo addressed to five people is:

a. post it on the bulletin board
b. attach a routing slip
c. duplicate the memo and send each person his own copy

_____ 8. If your employer's mail included the following items, which should be placed in first order to get his attention?

a. interoffice memo
b. trade journal
c. special delivery letter

_____ 9. In a zip code such as 14622, the last two numbers (22) represent:

a. local postal zone
b. city or sectional center
c. national postal zone

_____ 10. The most efficient way of mailing monthly statements (bills) would be:

a. type an envelope for each statement
b. type an address label and attach to an envelope for each
c. enclose each in a window envelope

III. Select the most efficient and economical method of shipping the following items. Write your choice in the space provided.

_____ 1. An electric typewriter weighing 30 lbs. being shipped to a newly opened branch office 75 miles away.

a. Air Express
b. Parcel Post
c. UPS

_____ 2. A steel safe weighing 300 lbs. being shipped to a customer 1800 miles away--speed of delivery not essential. Private delivery to and from a terminal is available if needed.

a. Bus
b. Air
c. Truck

_____ 3. A designer's just-completed fashion line to meet a manufacturer's deadline with 24 hours, to a city 600 miles away.

a. Air Freight
b. Air Express
c. Bus

2-3-4

_____ 4. Your are sending a supply of catalogs and stationary to your London, England office. If cost rather than speed of delivery is more important, you would send the materials:

a. Air Freight
b. Air Express
c. Boat

_____ 5. Magnetic tapes requiring controlled temperature environment must be transported by:

a. Bus
b. UPS
c. Air

****

Did the student complete the test on mail handling with 80% accuracy within 30 minutes?

[] Yes [] No

Comments: _____

_____

_____

_____

_____

_____

2-3-5

COURSE: Office Training
UNIT: Word Processing
CODE: 14330301

MODULE: Production Typing
TASK: 01 Type a business letter with carbon copies and envelopes

MAJOR OBJECTIVE

01 Given a medium-sized, unarranged, handwritten letter containing a simple table and special parts with errors in punctuation and paragraphing, the student will type on letterhead, in an appropriate letter style, an original copy with carbon copies and envelope within 30 minutes with all errors corrected.

ENABLING OBJECTIVES	SUGGESTED INSTRUCTIONAL CONTENT
Preparation The student will identify, select and understand the proper usage of various types of typing paper. The student will identify and understand the basic letter styles. The student will identify and use various types of carbon paper. The student will vertically center a letter and determine even margin settings. The student will identify and place the parts and special parts of a letter in proper sequence. The student will select and properly use corrective aids. The student will proofread and correct punctuation and paragraphing errors. The student will determine tab settings. Production The student will type an arranged letter in each basic style with carbon copies and all errors corrected. The student will type a standard business envelope making all necessary error corrections.	Various types of typing paper Samples of each letter style Usage of carbon paper Placement formulas Parts of a business letter Various types of corrective aids Arranged letter Punctuation and paragraph exercises Envelope problems Care and maintainence of work station

MODULE: Production Typing

TASK(S):01 Type a business letter with carbon copies and envelope

NAME: _____

SECTION: _____

DATE: _____

CRITERION-REFERENCED MEASUREMENT

Was letterhead paper used?

Was an acceptable letter style used?

Was letter completed within 30 minutes?

Were all typographical errors neatly corrected?

Were correct adjustments made to the following:

- paragraphing?
- special parts?
- punctuation?
- placement:
  1. letter?
  2. table?
  3. envelope?

****

Did the student type a mailable business letter with carbon copies and envelopes within 30 minutes with all errors corrected?

[] Yes [] No

Comments: _____

_____

_____

_____

_____

_____

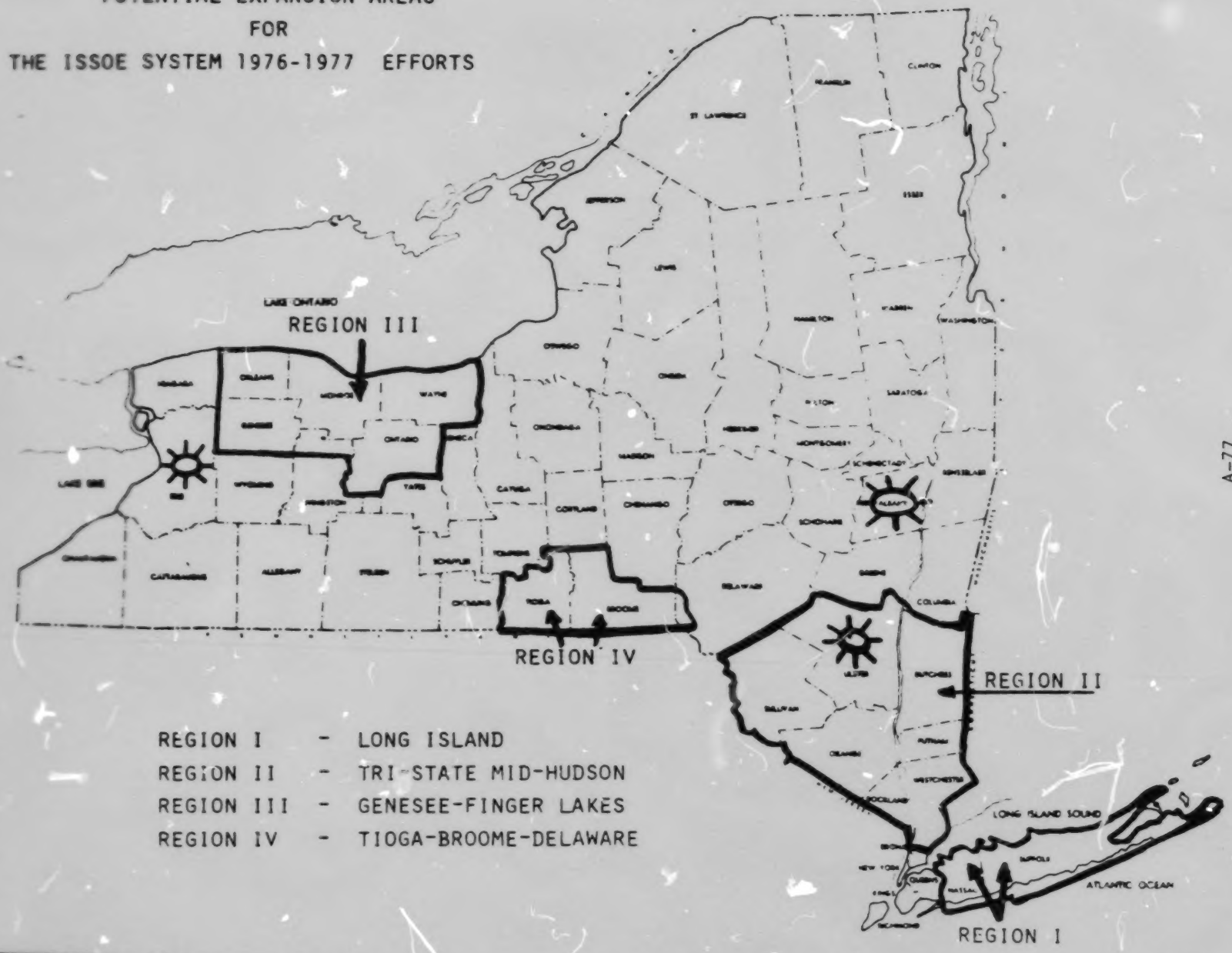
3-1-2

SAMPLE PROBLEM SITUATION

FROM ROBERT SHORT, PROJECT DIRECTOR / TO PEOPLES BANK / 25 MAIN ST / NEW YORK 10017 CC AMERICAN EXPRESS / 75 LEXINGTON AVE / NEW YORK 10017 / BETTER BUSINESS BUREAU / 12 N. CHESTNUT ST. / WHITE PLAINS NEW YORK 12504 / SUBJECT: FINAL REQUEST FOR REIMBURSEMENT / ATTN MR SEYMORE TWIG / BRANCH MANAGER / ON JULY 7, 1976 I CALLED YOUR OFFICE AND SPOKE TO MISS BARBARA NERDY REGARDING A BATCH OF LOST TRAUBLERS CHECKS. SHE INFORMED ME AT THE TIME THAT I MUST PERSONALLY COME INTO YOUR MAIN OFFICE ON SOUTH AVENUE TO FILE A CLAIM REPORT. THIS I DID ON THE VERY NEXT DAY - JULY 8, 1976 AND WAS TOLD A REIM-BURSEMENT CHECK WOULD BE FORTHCOMING. IT HAS BEEN TWO WEEKS SINCE SIGNING THE AFORE-MENTIONED CLAIM REPORT AND I HAVE NOT AS YET RECEIVED ANY FURTHER COMMUNICATION FROM THE PEOPLES BANK. FOR YOUR REFERENCE PURPOSE I AM LISTING THE CHECK NUMBERS AND AMOUNTS 020-0707-118 $50 / 020-0707-119 $50 / 020-0707-120 $50 / 020-9088-031 $20. YOUR IMMEDIATE ATTENTION TO THE ABOVE MATTER WILL BE APPRECIATED.

3-1-3

POTENTIAL EXPANSION AREAS
FOR
THE ISSOE SYSTEM 1976-1977 EFFORTS



REGION I - LONG ISLAND
REGION II - TRI-STATE MID-HUDSON
REGION III - GENESEE-FINGER LAKES
REGION IV - TIOGA-BROOME-DELAWARE

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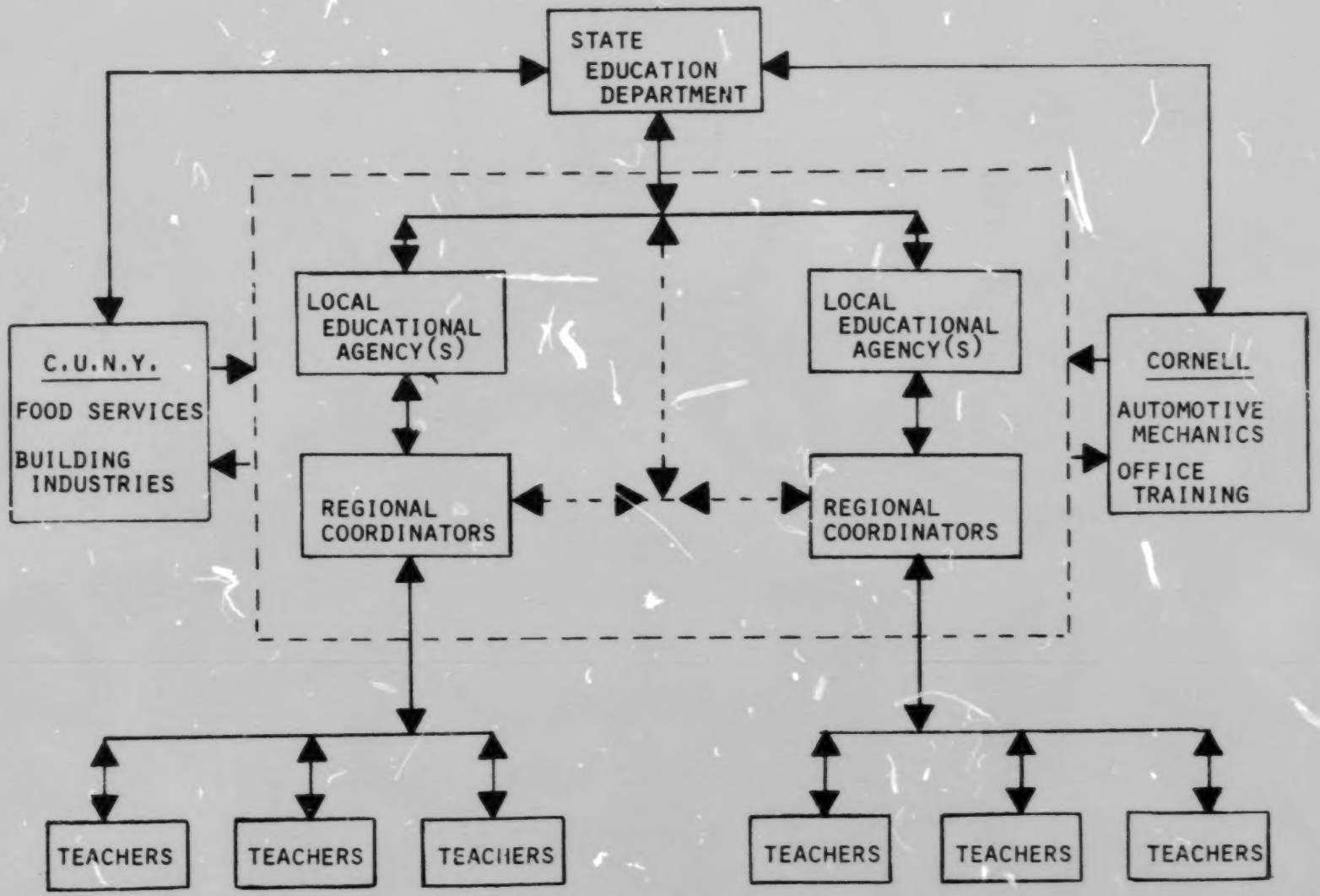
THE ISSOE ORGANIZATION CHART



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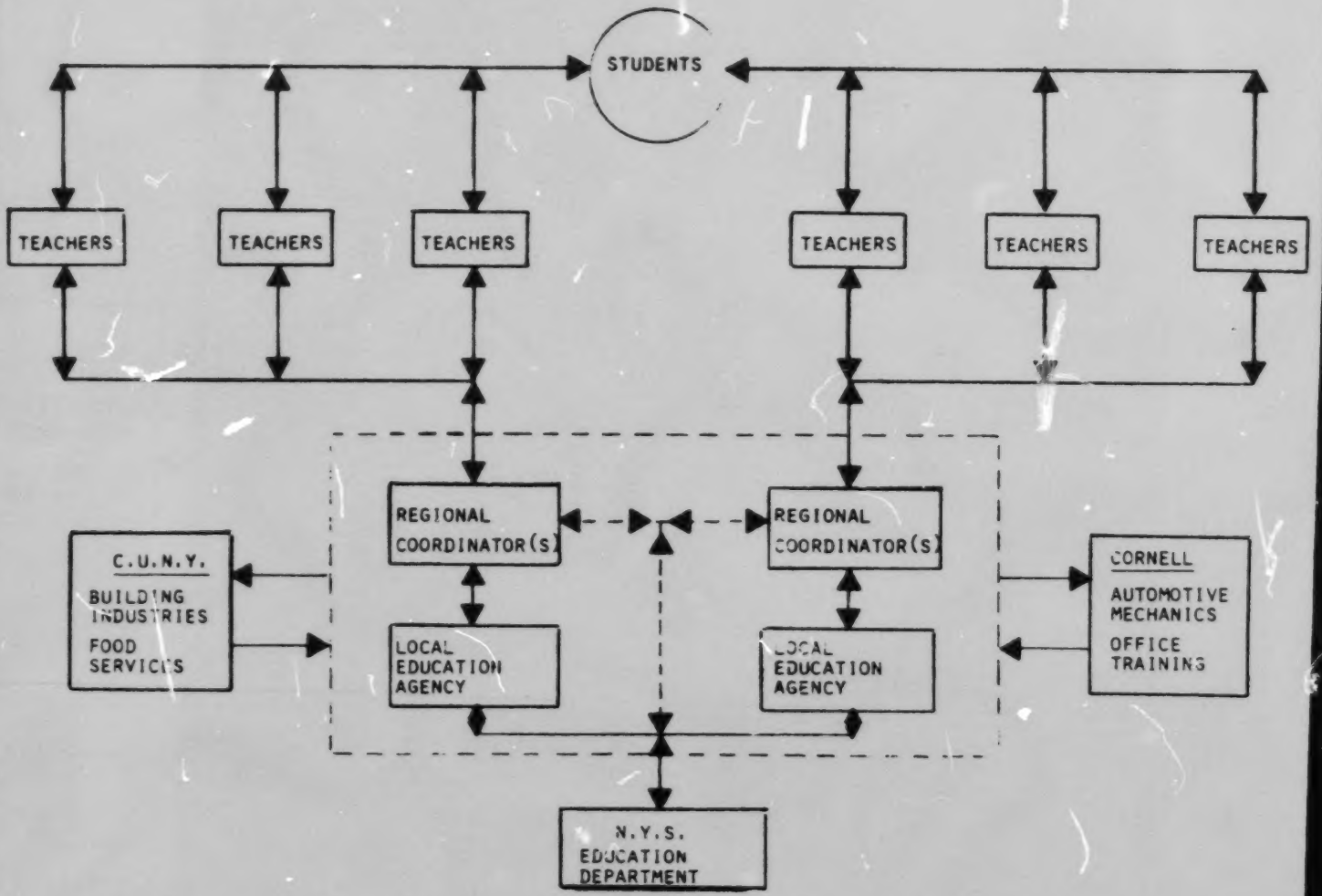
ISSOE INFORMATION FLOW



I S S O E

PROGRESS CHART

AUTOMOTIVE MECHANICS PROGRAM

STUDENT:			R & R BRAKE SHOES	R & R PARKING BRAKE CABLE	R & R DISC BRAKE CALIPER	R & R BRAKE LINE	R & R WHEEL CYLINDER	R & R MASTER CYLINDER	R & R POWER BRAKE ASSIST UNIT	R & R PROPORTIONING VALVE	OVERHAUL MASTER CYLINDER	RECONDITION WHEEL CYLINDER	OVERHAUL DISC BRAKE CALIPER	MACHINE BRAKE DRUMS & DISCS		
1.																
2.																
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																
11.																
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13.																
14.																
15.																

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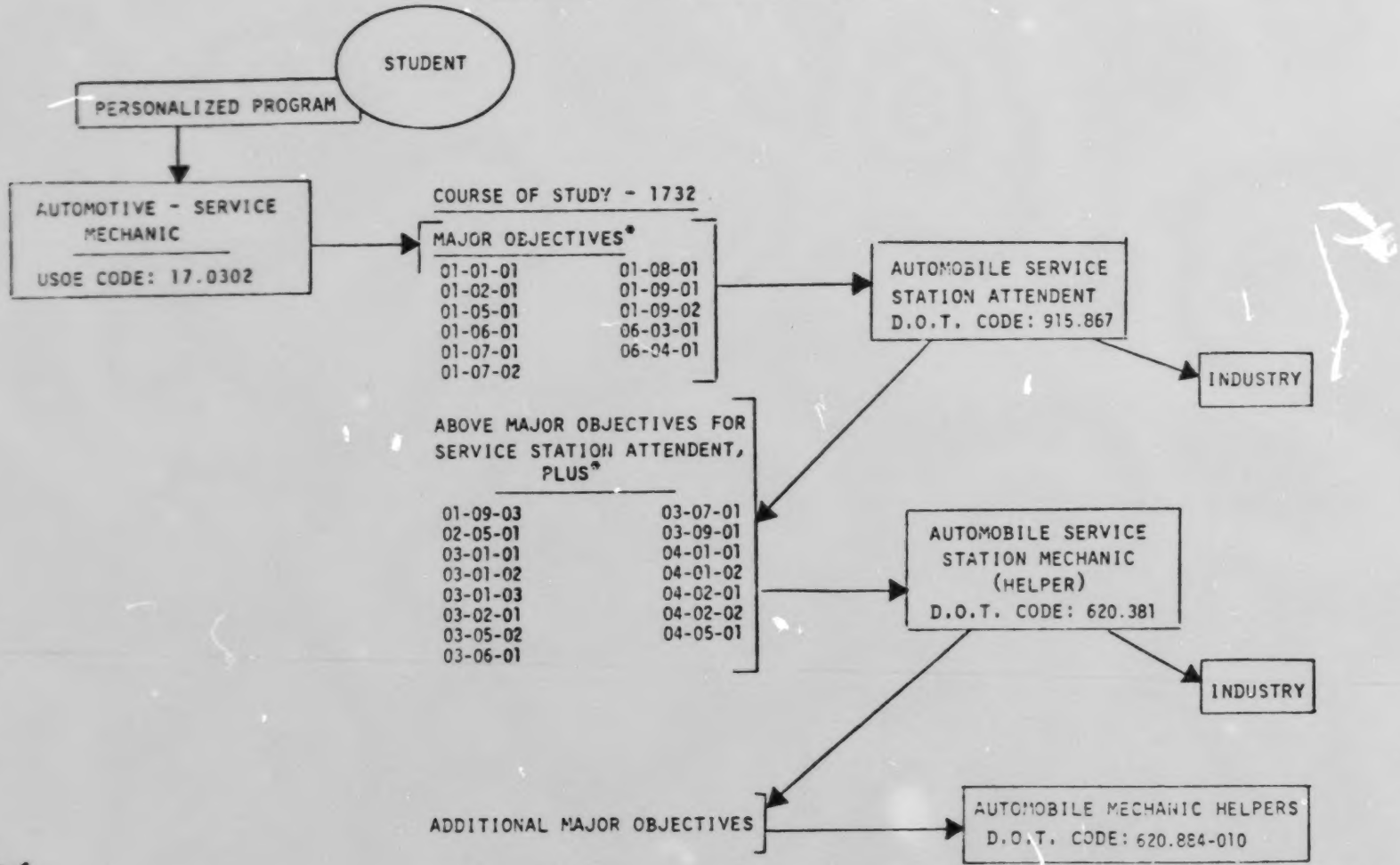
2/24/77

ISSUE

STUDENT PERSONALIZED PROGRAM SELECTION



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I S S O E

CURRICULUM DEVELOPMENT PROCESS

ISSOE CURRICULUM PROCESS

Step I - Divide Subject Matter Into Units.

Unit:

A portion of the course which consists of a logical clustering of modules.

1. Utilize content specialists to assist teachers in developing the units.
2. Occupational analyses are used to insure all units in the subject area are addressed.
3. Teachers are content experts, therefore their judgements are paramount.
4. Start a group development process to maximize participation and to obtain consensus.

Example:

MODULAR CURRICULUM DEVELOPMENT
FOR OCCUPATIONAL EDUCATION

AUTOMOTIVE SERVICE OCCUPATIONS
AUTOMOTIVE MECHANICS COURSE

UNIT 01: Introduction to Auto Mechanics
UNIT 02: Chassis and Frame
UNIT 03: Power Plant
UNIT 04: Electrical
UNIT 05: Drive Line
UNIT 06: Body Mechanical
UNIT 07: Accessories

Step II - Determine Appropriate Modules for Units.

Module:

A portion of the course which addresses related tasks drawn from occupational analyses expressed in performing terms. Each module contains one or more tasks or major objectives, enabling objectives, suggested instructional content and criterion-referenced measures.

1. A group developmental process should be used to obtain consensus.
2. Teachers with the aid of a content specialist determine appropriate modules.
3. These are based upon teacher expertise in occupation and upon a complete occupational analysis.

Step II - contd.

Example:

MODULAR CURRICULUM DEVELOPMENT

FOR OCCUPATIONAL EDUCATION

AUTOMOTIVE SERVICE OCCUPATIONS

AUTOMOTIVE MECHANICS COURSE

UNIT 01: INTRODUCTION TO AUTO MECHANICS

MODULE:

01. Shop Procedures
02. Personal Safety
03. Job Requirements
04. Job Opportunities
05. Hand Tools
06. Power Equipment
07. Lubrication Service
08. Wheel Bearing
09. Tire Service

UNIT 02: CHASSIS AND FRAME

MODULE:

01. Drum Brakes
02. Disc Brakes
03. Hydraulics
04. Suspension
05. N.Y.S. Inspection
06. Alignment
07. Steering

UNIT 03: POWER PLANT

MODULE:

01. Liquid Cooling
02. Carburetor
03. Storage & Delivery
04. Fuel Injection
05. Primary Circuit
06. Secondary Circuit
07. Tune Up & Diagnosis
08. Electronic Ignition
09. Exhaust System
10. Emission Control
11. Short Block
12. Valve Systems

UNIT 04: ELECTRICAL

MODULE:

01. Lights
02. Storage Battery
03. Charging System
04. Starting System
05. Instruments
06. Power Accessories

UNIT 05: DRIVE LINE

MODULE:

01. Drive Shaft
02. Rear Assembly
03. Clutch Assembly
04. Manual Transmission
05. Automatic Transmission

UNIT 06: BODY MECHANICAL

MODULE:

01. Body Adjustments
02. Glass Adjustments
03. Interior Appearance
04. Exterior Appearance

UNIT 07: ACCESSORIES

MODULE:

01. Heater
02. Air Conditioner
03. Speed Control Devices
04. Rear Defogger/Defroster

Step III - Develop Major Objectives.

Major Objective:

A statement of what the student should be able to do, the conditions under which the task will be performed, and the standards for evaluating the performance. The achievement of a major objective will be reported as a component of the student's employability profile.

Major Objectives - Intended Learning Outcomes

- Major competencies students are to learn (perform).
- Major competencies that are reported when completed.
- Major competencies that relate to jobs in the real world.
- Major competencies that can be clustered to D.O.T. job titles.
- Major competencies that can be utilized to show student progress.
- Major competencies that can be utilized to evaluate programs.
- Major competencies that can be utilized to determine resources needed.

1. Determine major competencies (tasks) needed to comprehend and perform module.
2. Develop the above competencies as major objectives utilizing the performance mode.
3. Utilize uniform format.

The major objective corresponds to a job or major tasks of a large job in business/industry. The following examples demonstrate this relationship in Automotive Mechanics:

Example 1. One job - one task/major objective.

Job: Chassis Lubrication

Task: Lubricate Auto Chassis

Example 2: One job - six tasks/major objectives.

Job: Complete Brake Job - (Drum Brake)

Tasks:

Remove and Replace Brake Shoes
Remove and Replace Brake Lines
Remove and Replace Wheel Cylinder
Overhaul a Master Cylinder
Recondition a Wheel Cylinder
Machine Brake Drums

The skills needed to perform the tasks/major objectives become minor or enabling objectives in the ISSOE curriculum system.

7/1/76

COURSE: MODULE:

UNIT: TASK:

CODE:

MAJOR OBJECTIVE

FORMAT FORM FOR ISSOE CURRICULUM

ENABLING OBJECTIVES	SUGGESTED INSTRUCTIONAL CONTENT

10/14/76

COURSE: State-approved course of study; the course consists of modules of instruction essential to the acquisition of competencies expected by the world of work.

UNIT: A logical clustering of related modules of instruction.

CODE: The first four digits, 1732 (A.M.) and 1433 (O.T.), identify the program area and course. The following pairs of digits represent unit, module and major objective.

MODULE: A portion of the course which addresses related tasks drawn from occupational analysis expressed in preformance terms. Each module contains one or more tasks and major objectives, enabling objectives, suggested instructional content and criterion-referenced measurement.

TASK: An activity which has a definite beginning and ending, and is performed within a limited period of time by an individual. One or more tasks are included in each module.

MAJOR OBJECTIVE

A statement of what the student should be able to do, the conditions under which task will be performed, and the standards for evaluating the performance. The achievement of a major objective will be reported as a component of the student's employability profile.

A-87

ENABLING OBJECTIVES

A subordinate objective which describes in performance terms a cognitive, affective, and/or psychomotor skill which the student will need to accomplish the major objective. Achievement of an enabling objective is not reported; performance and recording of this achievement is left to the discretion of the instructor.

SUGGESTED INSTRUCTIONAL CONTENT

A brief listing of suggested demonstrations and points of information which the instructor may wish to employ to assist the student in meeting the major objective.

COURSE: Auto Mechanics
UNIT: INTRODUCTION TO AUTO MECHANICS
CODE: 17320107

MODULE: LUBRICATION SERVICE
TASK: Change Engine Oil and Filter

MAJOR OBJECTIVE

01 Given an operational engine with oil, oil filter, necessary tools and materials, the student will:

- . drain the engine oil
- . remove old oil filter
- . prepare gaskets and gasket surfaces
- . install new engine oil and oil filter
- . check for leaks
- . complete the task in twice the flat rate time.

A-88

ENABLING OBJECTIVES	SUGGESTED INSTRUCTIONAL CONTENT
Given an operational engine with oil, oil filter, necessary tools and materials, the student will: . identify the various types and grades of oil . identify the types of oil filters . identify the various types and uses of drain plugs . demonstrate replacement of a stripped oil pan drain plug.	Demonstration: . Draining and refilling crankcase . Removing oil filter . Using special tools . Preparing and installing new oil filter Information: . Types of oils . Types of oil filters . Special tools . Types of drain plugs . Use of manuals

Step IV - Prepare Enabling Objectives.

Enabling Objective:

A subordinate objective which describes in performance terms a cognitive, affective, and/or psychomotor skill which the student will need to accomplish the major objective. Achievement of an enabling objective is not reported; performance of and recording of this achievement is left to the discretion of the instructor.

1. Enabling Objectives (Instructional Phase)
   - Minor competencies needed to learn major objectives.
   - Minor competencies to be used to prepare daily instructional program.
   - Minor competencies used to develop instructional strategies.
   - Minor competencies to be used for diagnostic purposes.

Step V - Prepare Criterion-Referenced Measurement Instruments.

Criterion-Referenced Measurement Instrument:

Instrument to determine if major objective has been met. Used to certify that performance has been obtained. Criterion-referenced measurement is derived from the major performance objective and directly measures the individual student's ability to successfully complete the task. The test items are performance-based and replicate as closely as possible the task as it would be evaluated in the world of work.

Example: (See Page 8)

Testing

ALL TESTING IS PERFORMANCE

What is the best balance between test quality and economy of test administration? This is the crux of performance testing. The ISSOE test method (Criterion-Referenced Measure) requires performance identical (as close as possible) to that specified in the actual job.

Concepts for ISSOE

a. Utilize the performance mode for testing. This can be executed as:
   1. psychomotor performance test
   2. valid cognitive test (verbal: oral or written)
   3. combination of 1 and 2.

CRITERION-REFERENCED MEASUREMENT SHEET

NAME _____ DATE _____

TEACHER _____ CLASS _____

MODULE: LUBRICATION SERVICE 17320107

MAJOR OBJECTIVE: 01

Given an operational engine with oil, oil filter, necessary tools and materials, the student will:

- . drain the engine oil
- . remove old oil filter
- . prepare gaskets and gasket surfaces
- . install new engine oil and oil filter
- . check for leaks
- . complete the task in twice the flat rate time.

A-90

Did student, when applicable:

1. Observe safety standards? _____
2. Use trade acceptable standards? _____
3. Meet manufacturer's specs? _____
4. Use proper procedure? _____
5. Use proper tools? _____
6. Observe good housekeeping practices? _____
7. Complete necessary paper work? _____
8. Complete the job in an acceptable time period based on flat rate time? _____

CHECK ONE ONLY

MET MAJOR OBJECTIVE []

NEEDS FURTHER INSTRUCTION []

REMARKS:

Step V - contd.

b. Two purposes of testing as utilized by the ISSOE effort.

1. Major Objective Testing

Purpose of certifying that competency has been attained (at this point in time).

- Teacher is best judge of this at the present time.
- Teachers' judgements will not vary significantly. (Competent teachers judging similar items). Congruence among test raters is high in the vocational area.

2. Enabling or Minor Objectives Testing

- Used to determine completion of minor competencies by student.
- Used to diagnose need for additional study, related study, remedial study, use of different learning strategies, etc., by student.

Step VI - Prepare Suggested Instructional Content.

Suggested Instructional Content:

A brief listing of suggested demonstrations and points of information which the instructor may wish to employ to assit the student in meeting the major objective.

Example: (See Page 6).

Step VII - Field Test Major Objectives.

a. Utilize in class-shop settings.

b. Record findings.

c. Note reactions.

Example: (See Page 10).

Step VIII - Evaluation.

a. Assess utilization in local setting

b. Review findings with other teachers in local setting.

c. Review findings with other teachers in region.

d. Obtain consensus with other teachers in region upon agreements and recommendations.

MODULE CRITIQUE SHEET

MODULE TITLE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

OBJECTIVE NO: _____

I. How many students started the objective? _____

How many students successfully completed the objective? _____

Of the students who were unsuccessful on the criterion-referenced measurement:

how many could not perform the task adequately? _____

how many could not perform the task within time limits? _____

how many had other reasons? Specify: _____

_____

II. Is the major objective acceptable as written? (check one) [] acceptable

[] revise as follows: _____

_____

_____

_____

_____

III. Did the criterion-referenced measurement adequately test the major objective? (check one) [] acceptable [] revise as follows: _____

_____

_____

_____

_____

_____

IV. Suggestions for revising/adding enabling objectives (both cognitive and psychomotor)

_____

_____

_____

_____

V. Comments on the overall quality and/or usefulness of this section of the module.

_____

_____

_____

_____

_____

Step VIII - contd.

e. Transfer consensus opinions to regional coordinator.

f. Regional coordinator send recommendations to clearing house.

g. Clearing House

i. Make judgements on minor issues.

ii. Regional coordinators review these with teachers and send findings to clearing house for action.

Step IX - Coding

The first four digits identify the program area and course. The following pairs of digits represent unit, module and major objective.

Example:

17	32	00	00	00
Trade Education	Automotive Mechanics	Unit	Module	Major Objectives

Cornell
Institute for
Occupational
Education

Department
of Education
Cornell University

ISSOE

REGIONAL VALIDATION PROCESS

SUMMARY REPORT

in cooperation with

The Office of Occupational Education,
New York State Education Department,
University of the State of New York
Albany, New York

August 1978

The New York State College of Agriculture and Life Sciences, a Statutory College of the State University at Cornell University, Ithaca, NY 14853.

ISSOE REGIONAL VALIDATION

INTRODUCTION

The major purpose of Occupational Education is to prepare individuals for employment, especially at entry-level. In order to meet this goal, competencies being taught must relate directly to jobs in business and industry. Therefore, it is essential that competencies developed for the ISSOE curriculum be compared with business and industrial needs to determine their authenticity in regard to world-of-work needs.

Most occupational teachers have a competent agricultural, business, health, trade or technical background. Therefore, teachers were requested to develop the major competencies (Major Objectives or Tasks) of the ISSOE system. These are the intended learning outcomes for students in occupational education programs. Since the thrust for developing the major objectives of each occupational education area was the responsibility of teachers, and possibly occupational analyses used were dated, it becomes imparative that these major competencies be validated to determine their appropriateness in meeting the needs of entry-level workers in representative business and industrial concerns.

The ISSOE validation process calls for determining which occupational competencies are needed by new employees on a regional, as well as statewide, basis. Therefore, it is necessary to conduct a regional validation for each area of occupational instruction to capture the special needs of any particular region. During the 1977-78 school year, a process for validating ISSOE tasks was tested utilizing the areas of Automotive Mechanics and Office Training.

PURPOSE

To develop and test a validation process for the Instructional Support System for Occupational Education (ISSOE) in New York State. The process to determine whether or not the ISSOE Major Objectives (tasks or competencies) are relevant or meaningful to tasks performed or competencies needed by entry-level workers in the corresponding occupation.

OBJECTIVE

1. Develop a process to validate ISSOE major objectives in regard to their relevance to competencies needed by entry-level workers in corresponding occupations.

2. Prepare an analysis of the validation of the ISSOE Automotive Mechanics and Office Training major objectives.

PROCEDURE

Suggested Alternatives for Conducting Regional ISSOE Validation

Alternative I

Existing Advisory and/or Craft Committees

Have each local program advisory committee in the region do a validation. Summarize responses of the separate advisory committees to produce a regional validation.

A. Discuss needs and procedures with teachers and administrators to gain their support.

B. Meet with teachers and their advisory committees to conduct validation.

Process: (May take three meetings)

First Meeting - Orientation

a. Discuss purposes and procedures.

1. Validate to insure that the ISSOE curriculum (Intended Learning Outcomes) does meet business and industrial needs.
2. Since ISSOE is a teacher authored curriculum, industrial validation is needed.
3. Perhaps this region has some needs different from other regions in the state.

b. What is required of committee members?

1. Understanding of ISSOE.

- This is a competency based curriculum.
- Curriculum composed of major and enabling objectives. Major objectives are the major competencies to be learned and demonstrated by the student. These major objectives should relate to jobs performed at work. Enabling objectives specify skills needed to perform major objectives. Committee concerned with major objectives basically. (Refer to enabling objectives to show that skills are included when needed.)
- Show and discuss examples of major and enabling objectives.
- Discuss total package - brief (rely on outline and examples).

2. Validation

- Handout and discuss validation package. Review instructions.
- Obtain consensus on a few sample major objectives to explain process. (Complete as many as practical at first meeting.)

C. Suggest they fill out this form at their convenience and before the next meeting.

Second Meeting - Work Session

a. Review ISSOE and answer questions (utilize teachers to assist).

b. Proceed through validation package of tasks - unit by unit. Obtain consensus on each task if reasonable (do not spend undue time on any particular objective).

c. Finish validation if practical.

Third Meeting - Review Process

a. Not needed if all work completed at second meeting, or
- may contact individuals independently if only a few tasks lack closure after the second meeting.

b. Obtain consensus on all tasks.

c. Add additional tasks recommended.

d. Suggest deletion of inappropriate tasks.

D. Send results to clearing house.

a. Send one validation form with consensus of group identified for each task to clearing house.

b. Send list of advisory committee and appropriate data on each member to clearing house.

E. Review statewide and regional findings with teachers and committee members when this information is received from clearing house.

Alternative II

Regional "Ad Hoc" Advisory Group

Select member(s) of existing teacher advisory or craft committee to form an "Ad Hoc" advisory group to perform the validation function. (Suggested for regions with a number of schools or programs.) Obtain approval from your occupational director or superintendent. Inform all administrators of the purpose of this "Ad Hoc" committee. Stress "Ad Hoc".

A. Solicit names of potential members from teachers.

B. Select committee and appoint committee members through proper channels.

C. Meet with committee (refer to procedures in Alternative I).

Alternative III

Special "Ad Hoc" Advisory Committee for Regional Coordinator

A. Use this alternative with extreme caution.

   a. Craft or advisory committees generally fall in the domain of the teachers.

   b. Advisory councils in the domain of the occupational education director.

   c. Be sure all parties are informed and understand the intent and purpose of this group. This is an "Ad Hoc" group and will be disbanded when their task has been completed.

   d. Follow local procedures for appointing committee members.

B. Follow procedure as set forth in Alternative I.

Alternative IV

Teachers Conduct Validation

A. Solicit cooperation of teachers to conduct validation survey.

B. Meet with teachers to discuss purposes and procedures to use in validation process.

   a. Review ISSOE as a teacher authored curriculum.

   b. Need to validate tasks to insure they meet needs of business and industry.

   c. Utilize list of tasks provided in validation survey to discuss what is to be done.

   d. Stress with teachers:

      1. they should contact the person in the firm that interviews and hires employees.

      2. they should take time to orient the interviewee properly.

      3. may take more than one meeting with the interviewee.

C. Contact teachers during process to determine their progress and help they may need.

D. Assemble data collected and send to clearing house on one form or send all validation forms to clearing house.

E. Send names and other appropriate data on people interviewed to obtain the data on the validation survey to the clearing house.

F. Review regional and state summary from clearing house with teachers and other appropriate individuals.

Teachers may use the above procedures and utilize their individual advisory committee to conduct the validation process.

Alternative V

Local/Regional Business-Industrial Committee to Conduct Survey

There may be a business, industrial, manufacturer or a comparable committee in the area that will be willing to assist.

A. Use Alternative I for procedures.

Alternative VI

Contract with appropriate individual to conduct regional validation survey with employers.

Be sure to:

A. Conduct appropriate orientation of ISSOE.

B. Orientation to purposes and process of ISSOE regional validation.

C. Contact individual occasionally to monitor progress.

D. Send results of regional validation survey to clearing house along with names and appropriate information on individuals contacted to complete the survey.

Regardless of the alternative used for the regional validation, have representation from all types of representative businesses and industrial concerns in the area involved as advisory committee members or interviewees. Especially have people responsible for hiring employees on the committee to determine the competencies needed by entry-level employees.

Forms (Appendices C and D) can be used to conduct the validation survey with regional employers.

RESULTS

Regional validation surveys were conducted by twelve ISSOE regional coordinators to test the proposed regional validation process. Validation survey instruments were completed by 183 individuals in the Automotive Mechanics field and 203 individuals in the Office Occupations field.

Results of the regional validation process demonstrated that regional validations of the ISSOE tasks can be accomplished as part of the routine duties of the ISSOE regional coordinator. Seventeen hours was the mean time that regional coordinators spent in conducting the regional validations. The maximum time spent by a coordinator was 78 hours.

The approach most often used was to contact teachers and utilize their advisory committees to complete the validation survey. In many cases, teachers contacted additional employers. Generally, the teachers and coordinators conducted the orientation session with the employers previous to their filling out the survey instrument. In two cases the regional coordinator contacted employers directly to conduct the validation process. It appeared that good results can be obtained by utilizing alternative approaches.

Results: Survey of ISSOE Regional Coordinators Regarding Their Conducting of the ISSOE Regional Validations (Appendix G)

1. Generally the ISSOE coordinator or the teacher made contact with employers to conduct the validation process in the region. In two cases students were also utilized to contact employers - with good results. In one region the ISSOE coordinator, teachers, students, and advisory committee members contacted employers. This produced the largest number of validation contacts for any region.
2. From 20 minutes to more than one hour was used for orientation of the employer to ISSOE before they completed the validation forms.
3. Orientation for employers was conducted in most cases by either the ISSOE coordinator or the teacher and in three cases both were involved. Students or advisory committee members were used for orientation in only one district.
4. ISSOE coordinators classified assistance from teachers as "valuable" to "very valuable". One region did not utilize teachers in the validation process.
5. Assistance from local advisory committee members was classified as "valuable" by about 70 percent of the ISSOE coordinators. In a few cases advisory committees were not functioning - (Office Training).
6. Approximately sixty percent of the ISSOE coordinators stated that assistance from administrators was "valuable". Two ISSOE coordinators did not request assistance.
7. Participation by employers was stated as "cooperative" to "very cooperative" with an average of 82 percent completing the validation surveys. Regional cooperation varied from 100 percent in four regions to 50 percent in one region. (Fifty percent was in a region that mailed validation surveys to employers.)
8. Employers received validation forms by mail in five regions, hand-carried in seven regions, and employers met at a central location in four regions. In some regions all three approaches were used.
9. It took the ISSOE regional coordinator approximately 7-1/2 hours to prepare for conducting the survey validation; 7 hours conducting the survey; and 2-1/2 hours summarizing survey results. Time ranged from 1 to 40 hours in preparation; 1-30 hours conducting; and 1-8 hours in summarizing.
10. Instructional package from CIOE was judged as "good" to "very good".
11. Additional benefits from conducting the ISSOE validation were:
    - "Identification of current trends."
    - "Teachers found value in hearing from employers."
    - "A chance for face-to-face discussion."
    - "Allows employers and instructors to meet."
    - "Produces feeling that educational institutions really care about employer input."
    - "Good public relations with teachers visiting with employers."

12. The following were suggested as improvements to conducting the regional validation:

- "Conduct validation with regard to seasonal demands of employers."
- "Start process earlier."
- "Greater involvement of teachers in the process."
- "Develop system to categorize employers as the response sometimes is dependent upon size or type of business."

Results of the ISSOE Regional Validation of Automotive Mechanics and Office Training programs are summarized by region and state total in Tables 1 and 2 respectively.

The ISSOE Automotive Mechanics program includes 115 major objectives (task or competencies). Of this total, 51 competencies were identified as needed, 59 as desirable competencies to have, and 5 competencies as not needed by entry-level automotive mechanics.

The ISSOE Office Training program includes 50 major objectives (tasks or competencies). Of this total, 20 competencies were identified as needed, 25 competencies as desirable to have, and 5 competencies as not needed by entry-level office occupations persons.

Generally, the five competencies not needed by entry-level employees in both the Automotive Mechanics and Office Training programs were not performed by workers in the particular shops/businesses or these competencies were performed by individuals with more than entry-level experience and expertise.

Comments by Respondents of Validation Survey

Automotive Mechanics

- "I think it is imperative that students, if possible, know where they are going to enable employers to establish whether they are temporary or permanent employment for developmental purposes."
- "In my opinion, it would be better for the students to receive concentrated study in the first priority and only brief exposure to theory of the third priority areas. Exposure to third areas is good, but concentrated study is not necessary for entry-level."
- "There is a great need for qualified personnel in the front-end alignment and frame repair areas."
- "Entry-level mechanics are not expected to be master mechanics which this curriculum seems to imply."
- "Employee must posses valid drivers license."
- "Teach how to identify size of engine so that correct parts can be ordered."
- "More training is needed in diagnosing problems."
- "Learn to clean-up mess."

- "Diagnose and repair wind noises and water leaks."
- "Emission system should be expanded."
- "Send tire repairs to tire shop."
- "Overhaul of Master and Wheel Cylinders not permitted by auto manufacturers."
- "Overhaul of Disc Brake Caliper not recommended due to legal risk."

Office Training

Unit: Employability - "These areas are extremely important. We have found that all too often young people graduating from high school with good job skills are unable to present themselves properly in an employment interview. They also seem to have difficulty in completing job applications. This should definitely be part of instruction to students."

"The student needs to better understand and appreciate the business (person's) important function in our economic structure."

Unit: Basic Skills Refresher - A large number of respondents identified use of spelling and grammer as additional tasks - (these are included in the Use of Basic Skills Module).

Unit: Communication Skills - Additions suggested were:

- "Use of basic communication skills."
- "Use of oral communication skills."
- "Use of basic courtesy skills."
- "Verification of recorded data."
- "Direct inquiries to correct person."
- "Proper office etiquette."

Unit: Word Processing

- "Use of office references."
- "Type various legal forms."
- "Use of automated memory equipment."
- "Statistical typing."

Unit: Filing and Retrieval

- "Basic ability to file is a must for any office. It is imperative that we can retrieve and replace items in a systematic and orderly fashion."
- "Filing is very important. Purchasing requires a good understanding of filing systems."
- "This marketing department uses temporary folders for custormers - then later all goes on microfilm."
- "Add microfilm retrieval."

Unit: Reprographics - Add:

- "Using photostatic copiers - Xerox, etc."
- "Making transparencies."

Unit: Adding and Calculating Machines

- "Basic maintenance of adding machines and calculators."

Unit: Financial and Recordkeeping Systems

- "Keep a complete set of ledgers for accounting system."
- "Maintain a budget."
- "This is not my field - not fair for me to answer."
- "This depends upon type of office."

Unit: Data Processing

- "A computer is being considered, but at the present time none of the above data processing tasks are used."
- "Not needed in this particular office."
- "This company is just getting into data processing and we feel that the tasks are not needed by entry-level employees."
- "Consider other data entry devices - other than key-punch."

Unit: Employability

- "Neatness, neat appearance, proper dress, attitude and ability to get along with others is very important for employment in a business office."

CONCLUSIONS

It appears that the ISSOE regional validation process is an appropriate and economical process to survey a large number of employers to determine if ISSOE tasks (Major Objectives or Major Competencies) are needed by entry-level workers in local business and industrial concerns.

The system was tested utilizing the areas of Automotive Mechanics and Office Training. It appears that this approach can be replicated for other occupational areas.

It was also concluded that this was an excellent exercise in promoting closer education-employer relations. A survey showed that employers were very cooperative in filling out the validation forms.

Results regarding the ISSOE Automotive Mechanics and Office Training showed that ISSOE competencies are very relevant to actual needs of entry-level employees in both the Automotive Mechanics and Office Occupations area. It also showed that there was some variation by region in regard to competencies needed by entry-level employees, but this variation was generally not significant. Tables 1 and 2 portray the variation by region by major objective.

RECOMMENDATIONS

The developed and tested ISSOE Regional Validation Process (Appendix B) can be used to determine appropriateness of ISSOE tasks to meet the needs of entry-level employees.

The process depends upon many factors but the most important appears to be a good orientation for the employer as to what ISSOE is, and the meaning of ISSOE tasks and major objectives.

It is suggested that this process be repeated in regions with fewer than ten respondents to obtain a more representative indication of competencies needed.

The system can be used for continual updating of competencies needed in occupational areas.

EDUCATIONAL IMPLICATIONS

The ISSOE validation process presents an efficient and economical process for improving articulation and accountability between occupational/vocational education and the business/industrial community locally, regionally and statewide with implications for national emphasis. The ISSOE validation process has implications for:

1. Assuring occupational/vocational educators that program competencies are directly related to employer needs locally and statewide.

2. Promoting greater statewide program uniformity by determining uniformity of competencies needed by employees statewide and also determining unique or special competencies needed in any particular region.

3. Improving efficiency in providing occupational/vocational education because of greater program uniformity statewide.

4. Promoting program flexibility by considering the special needs of each region.

5. Providing greater program continuity for the mobile student population.

6. Occupational/vocational educators being assured that competencies being taught relate direction to employment needs in the region.

7. Providing a very realistic approach of involving advisory committee members in a meaningful way in the curriculum process.

8. Promoting CBVE and individualized instruction.

9. Improving follow-up studies because all parties can be familiar with program competencies.

TABLE 1

ISSOE REGIONAL VALIDATION

AUTOMOTIVE MECHANICS

USOE CODE 170302

CIOE - JUNE 1978

RATING SCALE

1-Needed by Entry Mechanics
2-Desirable to have by Entry Mechanics
3-Not Needed by Entry Mechanics
4-Not Generally Performed

	Region												State
	1E	1W	2	3S	3N	4	6	8	9S	9N	10	12	
UNIT: INTRODUCTION OF MECHANICS													
CODE: TASK:													
010101 Identify Shop Hazards	1	1	1	1	1	1	1	1	1		1	1	1
010201 Identify Personal Safety	1	1	1	1	1	1	1	1	1		1	1	1
010301 Fill Out Job Application	1	1	1	1	1	1	1	1	1		1	1	1
010401 Select Personal Goals	2	2	1	1	3	2	2	1	2		1	2	2
010501 Identify, Use Hand Tools	1	1	1	1	1	1	1	1	1		1	1	1
010601 Identify Shop Power Equip.	1	1	1	1	1	1	1	1	1		1	1	1
010602 Lift Vehicle	1	1	1	1	1	1	1	1	1		1	1	1
010701 Change Engine Oil & Filter	1	1	1	1	1	1	1	1	1		1	1	1
010702 Lubricate Chassis	1	1	1	1	1	1	1	1	1		1	1	1
010801 Repack Front Wheel Bearings	1	1	1	1	1	1	1	1	1		1	1	1
010901 Rotate Tires	2	1	1	1	1	1	1	1	1		1	1	1
010902 Repair Leaking Tire	1	1	1	2	2	1	1	1	1		1	2	1
010903 Balance Wheels	1	1	1	2	1	1	1	1	1		1	1	1
UNIT: CHASSIS AND FRAME													
020101 R/R Brake Shoes	1	1	1	1	1	1	1	1	1	1	1	1	1
020102 R/R Parking Brake Cable	1	1	1	3	1	1	1	1	1	1	1	1	1
020201 R/R Disc Brake Caliper	1	1	1	2	1	1	1	1	1	1	1	1	1
020301 R/R Brake Lines	1	1	1	2	1	1	1	1	1	1	1	1	1
020302 R/R Wheel Cylinder	1	1	1	2	1	1	1	1	1	1	1	1	1
020303 R/R Master Cylinder	1	1	1	2	1	1	1	1	1	1	2	1	1
020304 R/R Power Brake Asst.Unit	1	1	1	2	1	1	2	2	2	2	2	2	2
020305 R/R Proportioning Valve	1	2	1	2	1	1	2	2	2	2	2	2	2
020306 Overhaul a Cylinder	2	2	1	2	2	2	2	2	2	2	2	3	2
020307 Recondition Wheel Cylinder	2	2	1	2	2	1	1	1	2	2	2	2	2
020308 Overhaul Disc Brake Caliper	2	2	1	2	1	1	1	2	3	1	2	2	2
020309 Machine Brake Drums	1	1	2	2	2	1	2	2	2	1	2	2	2
020310 Machine Disc Brake Rotor	1	2	2	2	2	1	2	2	2	1	2	2	2
020401 R/R Shock Absorbers	1	1	1	1	1	1	1	1	1	1	1	1	1
020402 Measure Standing Height	1	2	2	3	2	1	2	2	2	2	2	2	2
020403 Check Front End for Wear	1	1	1	2	1	1	1	1	2	1	2	1	1
020404 R/R Front End Linkage	1	1	1	2	2	1	2	1	2	1	2	1	1
020405 R/R Ball Joints	1	1	1	2	1	1	1	1	3	1	2	2	1
020406 R/R Control Arms	1	1	1	2	2	1	1	2	2	2	2	2	2
020407 R/R Coil Springs	1	2	1	1	2	1	2	2	3	2	2	2	2

	Region												State
	1E	1W	2	3S	3N	4	6	8	9S	9N	10	12	
UNIT: CHASSIS AND FRAME contd.													
020408 R/R Leaf Spring	1	2	1	2	2	2	2	1	3	2	2	2	2
020409 R/R Torsion Bar	1	2	1	2	1	1	2	2	3	3	2	2	2
020501 Perform State Inspection	1	1	1	2	1	1	1	1	1	1	1	1	1
020601 Align Front End	1	2	2	2	3	1	1	2	3	2	2	2	2
020701 Adjust Pitman Arm Preload	1	2	2	2	3	2	2	2	3	2	2	2	2
020702 Check Oil Pressure	1	2	2	2	3	1	2	3	3	2	2	2	2
020703 R/R Power Steering Hose	1	1	1	2	1	1	1	1	1	1	2	1	1
020704 R/R Power Steering Pump	1	1	1	2	1	1	1	1	2	2	2	2	1
020705 R/R Steering Box	1	1	1	2	2	1	2	2	2	1	2	2	2
UNIT: POWER PLANT													
030101 Inspect & Test Cooling System	1	1	1	1	1	1	1	1	1	1	1	1	1
030102 Drain, Flush, Refill C.S.	1	1	1	1	1	1	1	1	1	1	1	1	1
030103 R/R Minor Parts Cooling Sys.	1	1	1	1	1	1	1	1	1	1	1	1	1
030104 R/R Major Parts Cooling Sys.	1	1	1	2	1	1	1	1	1	1	1	2	1
030201 Service Carburetor	1	1	2	1	1	1	1	1	1	1	1	1	1
030202 Overhaul Carburetor-1 Barrell	2	2	2	2	2	2	2	2	3	2	2	3	2
030203 Overhaul Carburetor-2 Barrell	2	2	2	2	2	2	2	2	3	2	2	3	2
030204 Overhaul Carburetor-4 Barrell	1	2	2	2	2	2	2	2	3	2	2	2	2
030301 Service Fuel Stor./Del.Sys.	2	2	1	1	2	1	2	1	1	1	1	2	1
030401 Service Fuel Injection Sys.	2	2	3	3	3	3	2	2	3	3	3	3	3
030501 Test Primary Ignition Circuit	1	1	1	2	1	1	2	1	1	2	1	2	1
030502 Replace/Adjust Primary Cir.	1	1	1	1	1	1	1	1	1	1	1	2	1
030503 Overhaul Distributor	2	2	2	2	2	2	2	2	2	2	2	2	2
030601 Service Ignition Sec.Comp.	1	1	1	1	1	1	1	1	1	2	1	1	1
030701 Perform Minor Tune-up	1	1	1	1	1	1	1	1	1	1	1	1	1
030702 Connect/Program Analyscope	1	2	3	2	1	2	2	2	1	2	1	2	2
030703 Diagnose Eng.Electronically	1	2	3	2	1	2	2	2	1	2	2	2	2
030801 Diagnose Autolite Elect.	1	2	2	2	1	2	1	2	2	2	2	1	2
030802 R/R Comp.Autolite Ign.Sys.	1	2	1	2	2	2	2	2	2	2	2	1	2
030803 Test Comp. Chrysler Ign.Sys.	1	2	2	2	2	2	2	2	2	3	2	2	2
030804 Test GM "HEI" Dist.Coil Assem.	1	2	2	2	2	2	2	2	2	2	2	2	2
030901 R/R Minor Pts. Exhaust System	1	1	1	1	1	1	1	1	1	1	1	1	1
030902 R/R Major Pts. Exhaust System	1	1	1	2	1	1	1	1	1	1	1	1	1
031001 Identify/Test Emission Control	1	1	1	1	1	1	2	1	2	1	1	1	1
031101 Service Timing Chain/Cams.	2	2	2	2	2	2	2	2	2	3	2	2	2
031102 Service Pistons/Rings	2	2	2	2	2	2	2	2	2	3	2	3	2
031103 R/R Crankshaft	2	3	2	2	2	2	3	2	3	3	2	3	2
031104 Machine the Short Block	3	3	3	3	4	3	3	3	3	3	3	3	3
031201 R/R Rocker Arms	1	1	1	2	1	1	2	1	2	2	2	2	2
031202 R/R Cylinder Head	1	1	1	2	2	1	2	1	2	2	1	2	2
031203 Service Cylinder Head	1	2	2	2	2	2	2	2	2	2	2	2	2

	Region												State
	1E	1W	2	3S	3N	4	6	8	9S	9N	10	12	
UNIT: ELECTRICAL													
040101 Test Electrical System	1	1	1	2	1	1	1	1	2	1	1	1	1
040102 R/R Comp.Lighting System	1	1	1	2	1	1	1	1	1	1	1	1	1
040201 Start Engine w/Booster Cable	1	1	1	1	1	1	1	1	1	1	1	1	1
040202 Service/Test Battery	1	1	1	1	1	1	1	1	1	1	1	1	1
040301 Test, R/R Comp.Charg.System	1	1	1	2	1	1	1	1	1	1	1	1	1
040302 Test/Overhaul Alternator	1	2	2	2	3	2	2	2	2	1	2	2	2
040401 Test,Diagnose,R/R Start Sys.	1	1	2	2	1	2	1	1	1	1	2	1	1
040402 Overhaul Starter	1	2	2	2	3	2	2	1	2	1	2	2	2
040501 Test Instruments	1	2	2	2	2	2	2	2	2	1	2	2	2
040502 R/R Indicators	1	2	3	2	3	2	2	2	2	2	2	2	2
040601 Test, R/R Power Antenna	2	2	2	3	2	2	3	3	3	2	3	2	2
040602 Test, R/R Power Seats	1	2	3	2	2	2	3	3	3	2	3	2	2
040603 Test, R/R Power Windows	1	2	3	2	2	2	3	3	3	2	2	2	2
UNIT: DRIVE LINE													
050101 R/R Universal Joint/Drive Shaft	1	1	1	2	1	1	1	1	1	1	1	1	1
050103 R/R Constant Velocity Joint	1	2	2	1	1	2	2	2	2	2	2	2	2
050201 R/R Differential Assembly	1	2	2	2	1	2	2	2	2	2	2	2	2
050202 Overhaul Diff. Assembly	2	3	2	3	2	2	3	2	3	3	2	3	3
050203 R/R Axle & Bearing Seal	1	1	1	2	1	1	1	1	2	1	2	2	1
050301 R/R Clutch	1	1	1	2	1	1	2	1	2	1	1	2	1
050401 R/R Manual Transmission	1	1	1	2	1	1	2	1	2	1	1	2	1
050402 Overhaul Manual Transmission	2	2	2	3	2	2	3	2	3	3	2	3	2
050501 R/R Automatic Transmission	2	2	1	2	1	2	2	2	2	1	2	2	2
050502 Overhaul Auto.Transmission	2	3	2	3	2	3	3	3	3	3	2	3	3
050503 R/R Fluid, Filter, Seal & Gas.	1	1	1	2	1	1	1	1	2	1	1	1	1
050504 Adjust Bands	1	2	2	2	2	2	2	2	3	2	2	2	2
050505 Adjust Linkage	1	1	2	2	2	1	2	2	2	1	2	2	2
050506 Pressure Test Transmission	1	2	2	2	2	2	3	2	2	2	2	2	2
UNIT: BODY MECHANICAL													
060101 Make Minor Exterior Adj./SW	1	2	2	2	2	2	2	2	1	2	1	2	2
060102 Make Windshield Wiper Repairs	1	1	2	2	1	1	2	2	1	1	1	1	1
060103 Make Minor Int.Body Adjust.	1	2	3	2	2	2	2	2	2	1	2	2	2
060104 Perform Major Door Adjustments	1	3	3	2	2	3	2	2	2	2	2	2	2
060201 Perform Necessary Glass Adj.	1	2	3	2	2	3	2	2	2	2	2	2	2
060301 Clean/Polish Interior Surfaces	2	2	2	2	1	2	2	2	3	1	1	2	2
060401 Clean/Polish Exterior	2	2	2	2	1	2	2	2	3	1	1	2	2
060402 Clean/Treat Vinyl Top	2	2	2	2	1	2	2	2	3	1	2	2	2
UNIT: ACCESSORIES													
070101 Service/Test Heater	1	1	1	2	1	1		1	2	1	1	1	1
070201 Test Air Conditioner	1	1	1	2	2	2		3	3	2	2	1	2
070202 Evacuate/Charge Air Conditioner	1	2	2	2	2	2		3	3	2	2	1	2
070203 R/R Components	1	2	2	2	3	2		3	2	2	2	2	2
070204 Overhaul Air Cond.Compressor	2	3	3	3	4	2		3	3	3	2	2	3
070301 Test/Adjust Speed Control	2	2	3	2	3	2		3	3	2	2	2	2
070401 Test, R/R Rear Defogger	1	2	3	2	3	2		2	3	2	2	2	2

TABLE 2
ISSOE REGIONAL VALIDATION

OFFICE TRAINING

USOE CODE 140303

CIOE - JUNE 1978

RATING SCALE

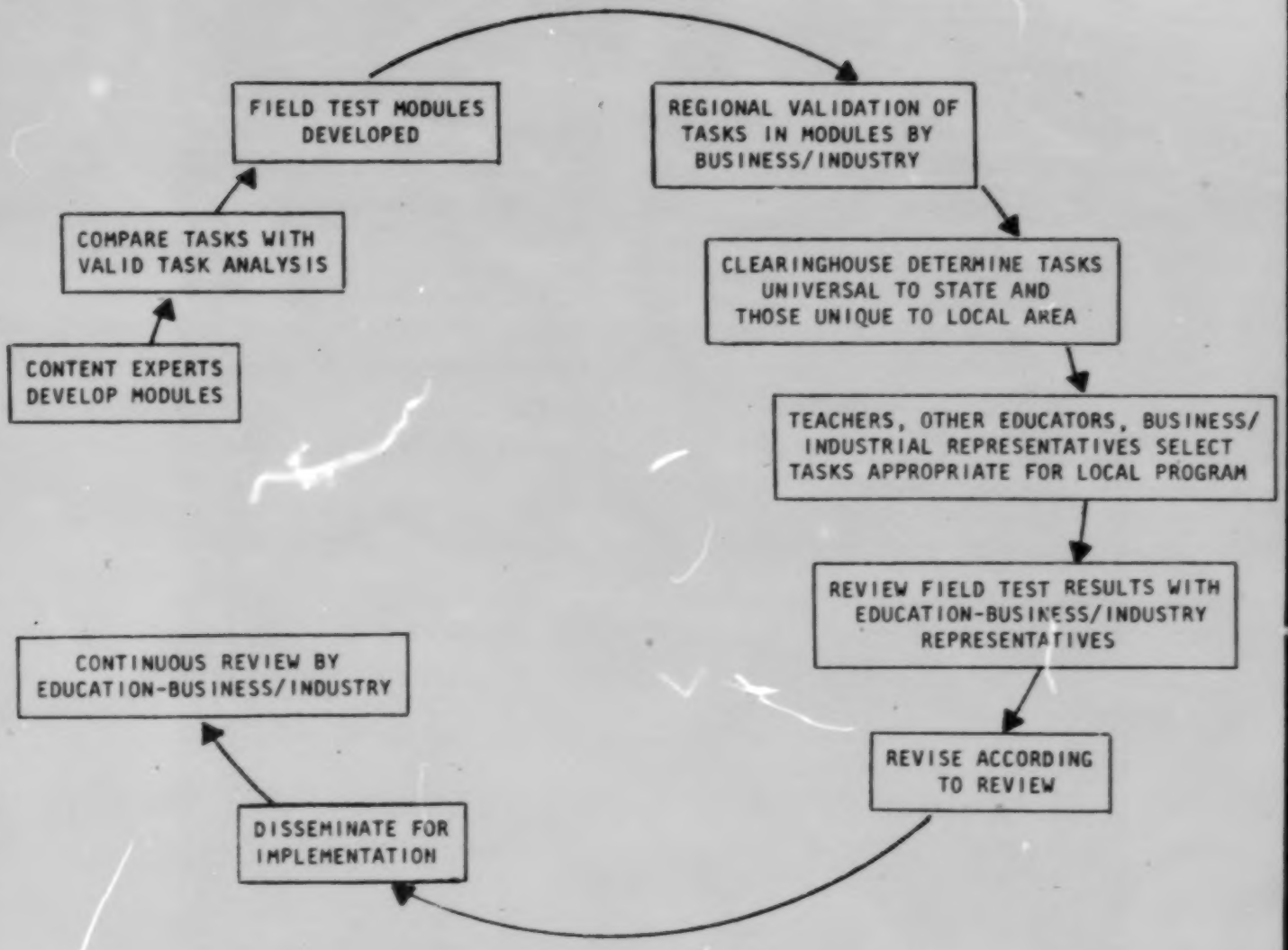
1-Needed by Entry Level Employee
2-Desirable to have by Entry Level Employee
3-Not Needed by Entry Level Employee
4-Not Generally Performed

	Region										State
	1E	1W	3S	3N	4	6	8	9S	9N	10	
UNIT: BASIC SKILLS REFRESHER											
CODE: TASK:											
010101 Use Basic English Skills	1	1	1	1	1	1	1	1		1	1
010201 Use Basic Arithmetic Skills	1	1.	1	1	1	1	1	2		1	1
UNIT: ORAL COMMUNICATION											
020101 Receive/Accomodate visitors	1	1	3	1	1	1	1	1		1	1
020102 Use Telephone Systems & Services	1	1	1	1	1	1	1	1		1	1
020103 Receive, Route, Place Phone Calls	1	1	2	1	2	1	1	1		1	1
020201 Compose Written Communication	2	2	1	2	2	1	2	2		2	2
020301 Process In-Out Communication/Mtls.	2	1	2	1	1	1	1	1		1	1
UNIT: WORD PROCESSING											
030101 Type Arranged Business Letter	1	1	1	1	1	1	1	1		1	1
030102 Type Long-Unarranged Business Letter	2	2	2	1	2	1	1	2		1	2
030103 Type 2-Page Unarranged Bus.Letter	2	2	2	1	2	1	2	2		1	2
030104 Type Medium Unarranged Bus.Letter	2	1	2	1	1	1	2	2		1	1
030105 Type Handwritten Memorandum	1	1	2	1	2	1	1	2		1	1
030106 Type Arranged Table	1	2	3	1	1	1	1	2		1	1
030107 Type Handwritten Unarranged Table	1	2	3	2	2	1	1	2		1	2
030108 Type a Manuscript	2	2	3	2	3	2	2	2		1	2
030201 Record-Revise-Playback Multi-copier	3	3	2	2	3	2	2	2		2	2
030301 Transcribe Dictated Business Letter	2	2	2	1	2	1	1	2		2	2
UNIT: FILING AND RETRIEVAL											
040101 Alphabetic Filing	1	1	1	1	1	1	1	1		1	1
040201 Numeric Filing	1	1	1	1	1	1	1	1		1	1
040301 Geographic Filing	1	2	2	1	2	2	2	2		1	2
040401 Subject Filing	1	1	2	1	1	1	1	1		1	1
040501 Define Filing Terminology	2	2	2	1	1	2	2	2		2	2
040502 File & Retrieve Correspondence	1	1	1	1	1	1	1	1		1	1
UNIT: REPROGRAPHICS											
050101 Prepare Spirit Master/Print Copies	2	2	2	2	2	1	2	2		1	2
050201 Prepare Stencil/Print Copies	1	2	3	2	2	1	2	2		2	2
050301 Prepare Paper Master/Print Copies	2	2	3	2	2	2	2	2		1	2
050401 Prepare Spirit Master/Use Copy Mach.	2	2	3	2	2	2	2	2		1	2
050501 Select Proper Duplication Process	2	2	3	2	1	2	2	2		1	2

	Region										State
	1E	1W	3S	3N	4	6	8	9S	9N	10	
UNIT: ADDING/CALCULATING MACHINES											
060101 Solve Problems on Ten-Key Machine	1	2	2	1	2	1	1	1	1	1	1
060102 Solve Problems on Full-Key Machine	2	2	2	1	2	2	2	2	2	2	2
060201 Solve Problems on Ten-Key Elec.Cal.	1	2	3	1	2	1	1	1	1	1	1
060202 Solve Problems on Elec.Display Cal.	1	2	3	2	2	1	2	2	1	1	2
060203 Solve Problems on Rotary Calculator	3	3	3	2	3	3	3	2	4	3	3
UNIT: FINANCIAL/RECORDKEEPING SYSTEM											
070101 Establish/Maintain Petty Cash Fund	2	2	3	2	2	2	2	2	2	2	2
070201 Calculate Payroll	2	2	3	2	3	2	3	2	2	2	2
070301 Maintain Checking Account Record	2	2	3	1	2	2	2	2	2	2	2
070302 Reconcile Bank Statement	2	2	3	1	2	1	2	2	2	2	2
070401 Maintain Stock Inventory	2	2	2	2	2	2	1	2	2	2	2
070501 Complete Purchasing/Sales Forms	1	2	2	1	1	2	2	2	1	1	1
UNIT: DATA PROCESSING											
080101 Define Data Processing	1	3	3	1	2	2	3	2		3	2
080102 Describe Standard Punch Card	2	3	3	1	2	2	3	2		2	2
080103 Describe Function of Computer System	2	3	3	1	2	2	3	2		3	3
080104 Define Hardware and Software	2	3	3	2	2	2	3	2		3	3
080201 Identify Keypunch/Parts & Function	3	3	3	2	2	2	3	3		3	3
080202 Punch Cards w/o Use of Program Unit	3	3	3	1	2	2	3	2		2	2
080203 Develop/Use Program Card Layout	3	3	3	1	3	3	3	2		3	3
UNIT: EMPLOYABILITY											
090101 Prepare Application/Data Sheet	1	1	2	1	1	1	1	1		1	1
090102 Oral Interview	1	1	1	1	1	1	1	1		1	1
090103 Complete Employment Documentation	1	1	1	1	1	1	1	1		1	1
090201 Plot Tentative Career Plan	1	2	1	1	1	2	2	2		2	2

APPENDIX A

ISSOL VALIDATION PROCESS


ISSOE
VALIDATION PROCESS
FIELD TEST MODULES DEVELOPED
REGIONAL VALIDATION OF TASKS IN MODULES BY BUSINESS/INDUSTRY
COMPARE TASKS WITH VALID TASK ANALYSIS
CLEARINGHOUSE DETERMINE TASKS UNIVERSAL TO STATE AND THOSE UNIQUE TO LOCAL AREA
CONTENT EXPERTS DEVELOP MODULES
TEACHERS, OTHER EDUCATORS, BUSINESS/ INDUSTRIAL REPRESENTATIVES SELECT TASKS APPROPRIATE FOR LOCAL PROGRAM
REVIEW FIELD TEST RESULTS WITH EDUCATION-BUSINESS/INDUSTRY REPRESENTATIVES
CONTINUOUS REVIEW BY EDUCATION-BUSINESS/INDUSTRY
REVISE ACCORDING TO REVIEW
DISSEMINATE FOR IMPLEMENTATION

APPENDIX B

ISSOE REGIONAL VALIDATION PROCESS

ISSOE REGIONAL VALIDATION

INTRODUCTION

The major purpose of Occupational Education is to prepare individuals for employment, especially at entry-level. In order to meet this goal, competencies being taught must relate directly to jobs in business and industry. Therefore, it is essential that competencies developed for the ISSOE curriculum be compared with business and industrial needs to determine their authenticity in regard to world-of-work needs.

Most occupational teachers have a competent agricultural, business, health, trade or technical background. Therefore, teachers were requested to develop the major competencies (Major Objectives or Tasks) of the ISSOE system. These are the intended learning outcomes for students in occupational education programs. Since the thrust for developing the major objectives of each occupational education area was the responsibility of teachers, and possibly occupational analyses used were dated, it becomes imparative that these major competencies be validated to determine their appropriateness in meeting the needs of entry-level workers in representative business and industrial concerns.

The ISSOE validation process calls for determining which occupational competencies are needed by new employees on a regional, as well as statewide, basis. Therefore, it is necessary to conduct a regional validation for each area of occupational instruction to capture the special needs of any particular region. During the 1977-78 school year, a process for validating ISSOE tasks was tested utilizing the areas of Automotive Mechanics and Office Training.

PURPOSE

To develop and test a validation process for the Instructional Support System for Occupational Education (ISSOE) in New York State. The process to determine whether or not the ISSOE Major Objectives (tasks or competencies) are relevant or meaningful to tasks performed or competencies needed by entry-level workers in the corresponding occupation.

OBJECTIVE

1. Develop a process to validate ISSOE major objectives in regard to their relevance to competencies needed by entry-level workers in corresponding occupations.

2. Prepare an analysis of the validation of the ISSOE Automotive Mechanics and Office Training major objectives.

PROCEDURE

Suggested Alternatives for Conducting Regional ISSOE Validation

Alternative I

Existing Advisory and/or Craft Committees

Have each local program advisory committee in the region do a validation. Summarize responses of the separate advisory committees to produce a regional validation.

A. Discuss needs and procedures with teachers and administrators to gain their support.

B. Meet with teachers and their advisory committees to conduct validation.

Process: (May take three meetings)

First Meeting - Orientation

a. Discuss purposes and procedures.

1. Validate to insure that the ISSOE curriculum (Intended Learning Outcomes) does meet business and industrial needs.

2. Since ISSOE is a teacher authored curriculum, industrial validation is needed.

3. Perhaps this region has some needs different from other regions in the state.

b. What is required of committee members?

1. Understanding of ISSOE.

- This is a competency based curriculum.
- Curriculum composed of major and enabling objectives. Major objectives are the major competencies to be learned and demonstrated by the student. These major objectives should relate to jobs performed at work. Enabling objectives specify skills needed to perform major objectives. Committee concerned with major objectives basically. (Refer to enabling objectives to show that skills are included when needed.)
- Show and discuss examples of major and enabling objectives.
- Discuss total package - brief (rely on outline and examples).

2. Validation

- Handout and discuss validation package. Review instructions.
- Obtain concensus on a few sample major objectives to explain process. (Complete as many as practical at first meeting.)

C. Suggest they fill out this form at their convenience and before the next meeting.

Second Meeting - Work Session

a. Review ISSOE and answer questions (utilize teachers to assist).

b. Proceed through validation package of tasks - unit by unit. Obtain concensus on each task if reasonable (do not spend undue time on any particular objective).

c. Finish validation if practical.

Third Meeting - Review Process

a. Not needed if all work completed at second meeting, or
- may contact individuals independently if only a few tasks lack closure after the second meeting.

b. Obtain concensus on all tasks.

c. Add additional tasks recommended.

d. Suggest deletion of inappropriate tasks.

D. Send results to clearing house.

a. Send one validation form with concensus of group identified for each task to clearing house.

b. Send list of advisory committee and appropriate data on each member to clearing house.

E. Review statewide and regional findings with teachers and committee members when this information is received from clearing house.

Alternative II

Regional "Ad Hoc" Advisory Group

Select member(s) of existing teacher advisory or craft committee to form an "Ad Hoc" advisory group to perform the validation function. (Suggested for regions with a number of schools or programs.) Obtain approval from your occupational director or superintendent. Inform all administrators of the purpose of this "Ad Hoc" committee. Stress "Ad Hoc".

A. Solicit names of potential members from teachers.

B. Select committee and appoint committee members through proper channels.

C. Meet with committee (refer to procedures in Alternative I).

Alternative III

Special "Ad Hoc" Advisory Committee for Regional Coordinator

A. Use this alternative with extreme caution.

   a. Craft or advisory committees generally fall in the domain of the teachers.

   b. Advisory councils in the domain of the occupational education director.

   c. Be sure all parties are informed and understand the intent and purpose of this group. This is an "Ad Hoc" group and will be disbanded when their task has been completed.

   d. Follow local procedures for appointing committee members.

B. Follow procedure as set forth in Alternative I.

Alternative IV

Teachers Conduct Validation

A. Solicit cooperation of teachers to conduct validation survey.

B. Meet with teachers to discuss purposes and procedures to use in validation process.

   a. Review ISSOE as a teacher authored curriculum.

   b. Need to validate tasks to meet needs of business and industry.

   c. Utilize list of tasks provided in validation survey to discuss what is to be done.

   d. Stress with teachers:

      1. they should contact the person in the firm that interviews and hires employees.

      2. they should take time to orient the interviewee properly.

      3. may take more than one meeting with the interviewee.

C. Contact teachers during process to determine their progress and help they may need.

D. Assemble data collected and send to clearing house on one form or send all validation forms to clearing house.

E. Send names and other appropriate data on people interviewed to obtain the data on the validation survey to the clearing house.

F. Review regional and state summary from clearing house with teachers and other appropriate individuals.

Teachers may use the above procedures and utilize their individual advisory committee to conduct the validation process.

Alternative V

Local/Regional Business-Industrial Committee to Conduct Survey

There may be a business, industrial, manufacturer or a comparable committee in the area that will be willing to assist.

A. Use Alternative I for procedures.

Alternative VI

Contract with appropriate individual to conduct regional validation survey with employers.

Be sure to:

A. Conduct appropriate orientation of ISSOE.

B. Orientation to purposes and process of ISSOE regional validation.

C. Contact individual occassionally to monitor progress.

D. Send results of regional validation survey to clearing house along with names and appropriate information on individuals contacted to complete the survey.

Regardless of the alternative used for the regional validation, have representation from all types of representative businesses and industrial concerns in the area involved as advisory committee members or interviewees. Especially have people responsible for hiring employees on the committee to determine the competencies needed by entry-level employees.

I S S O E

REGIONAL VALIDATION

The Instructional Support System for Occupational Education (ISSOE) is designed to specify entry-level job skills in a number of occupational education areas. These job skills are identified as tasks and these tasks are elaborated as major objectives in the ISSOE system. The curriculum content is being developed and refined by local teachers with the assistance of regional coordinators. To insure that the curriculum does, in fact, meet business/industrial requirements, we are asking members of advisory committees to review the tasks, as they have been identified, and to determine their appropriateness for new employees hired at entry-level jobs.

Tasks of the ISSOE Automotive Mechanics or Office Training program have been reviewed by the following on:

Date(s): _____

Name _____	Name _____
Title _____	Title _____
Company _____	Company _____
Address _____	Address _____
_____	_____
Name _____	Name _____
Title _____	Title _____
Company _____	Company _____
Address _____	Address _____
_____	_____
Name _____	Name _____
Title _____	Title _____
Company _____	Company _____
Address _____	Address _____
_____	_____
Name _____	Name _____
Title _____	Title _____
Company _____	Company _____
Address _____	Address _____
_____	_____

APPENDIX C

ISSOE AUTOMOTIVE MECHANICS TASK VERIFICATION FORM

I S S O E

January 1978

C1OE

AUTOMOTIVE MECHANICS TASK VERIFICATION FORM

Check below all tasks performed by automotive mechanics in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: INTRODUCTION OF AUTO MECHANICS

TASK:	CK	PRIORITY
Identify Shop Hazards		
Identify Personal Safety		
Fill Out Job Application		
Select Personal Goals		
Identify, Use and Care for Hand Tools		
Identify Shop Power Equipment		
Lift Vehicle		
Change Engine Oil and Filter		
Lubricate Chassis		
Repack Front Wheel Bearings		
Rotate Tires		
Repair a Leaking Tire		
Balance Wheels		

I S S O E

January 1978

C1OE

AUTOMOTIVE MECHANICS TASK VERIFICATION FORM

Check below all tasks performed by automotive mechanics in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: CHASSIS AND FRAME

TASK:	CK	PRIORITY
Remove and Replace Brake Shoes		
R & R Parking Brake Cable		
R & R Disc Brake Caliper, Pads and Rotor		
R & R Brake Lines		
R & R Wheel Cylinder		
R & R Master Cylinder		
R & R Power Brake Assist Unit		
R & R Proportioning Valve		
Overhaul a Master Cylinder		
Recondition Wheel Cylinder		
Overhaul Disc Brake Caliper		
Machine Brake Drums		
Machine a Disc Brake Rotor		
R & R Shock Absorbers		
Measure Standing Height		
Check Front End for Wear		
R & R Front End Linkage		
R & R Ball Joints		

UNIT: CHASSIS AND FRAME

TASK:	CK	PRIORITY
R & R Control Arms		
R & R Coil Springs		
R & R Leaf Spring		
R & R Torsion Bar		
Perform State Inspection		
Align Front End		
Adjust Pitman Arm Preload		
Check Oil Pressure - Power Steering		
R & R Power Steering Hose		
R & R Power Steering Pump		
R & R Steering Box		

I S S O E

January 1978

C I O E

AUTOMOTIVE MECHANICS TASK VERIFICATION FORM

Check below all tasks performed by automotive mechanics in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: POWER PLANT

TASK:	CK	PRIORITY
Inspect and Test Cooling System		
Drain, Flush & Refill Cooling System		
R & R Minor Parts - Cooling System		
R & R Major Parts - Cooling System		
Service Carburetor		
Overhaul Carburetor (one barrel)		
Overhaul Carburetor (two barrel)		
Overhaul Carburetor (four barrel)		
Service Fuel Storage & Delivery System		
Service Fuel Injection System		
Test the Primary Ignition Circuit		
Replace and/or Adjust Primary Circuit Components		
Overhaul Distributor		
Service Ignition Secondary Components		
Perform Minor Tune Up		
Connect and Program an Analyscope		
Diagnose an Engine Electronically		
Diagnose Autolite Electronic Ignition Problems		

UNIT: POWER PLANT

TASK:	CK	PRIORITY
R & R Components of Autolite Electronic Ignition System		
Test Components of Chrysler Electronic Ignition System		
Test G.M. "HEI" Distributor Assembly & Coil Assembly		
R & R Minor Parts of Exhaust System		
R & R Major Parts of Exhaust System		
Identify and Test Emission Controls		
Service Timing Chain and Camshaft		
Service Pistons and Rings		
R & R Crankshaft		
Machine the Short Block		
R & R Rocker Arms		
R & R Cylinder Head		
Service Cylinder Head		

I S S O E

January 1978

C1OE

AUTOMOTIVE MECHANICS TASK VERIFICATION FORM

Check below all tasks performed by automotive mechanics in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: ELECTRICAL

TASK:	CK	PRIORITY
Test Electrical System		
R & R Components of Lighting System		
Start an Engine Using Booster Cable		
Service and Test Battery		
Test, R & R Components of Charging System		
Test & Overhaul Automotive Alternator		
Test, Diagnose, R & R Components of the Starting System		
Overhaul Starter		
Test Instruments		
R & R Indicators		
Test, R & R Defective Components of Power Antenna		
Test, R & R, or Adjust Components of Power Seats		
Test, R & R Defective Components of Power Windows		

I S S O E

January 1978

C I O E

AUTOMOTIVE MECHANICS TASK VERIFICATION FORM

Check below all tasks performed by automotive mechanics in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: DRIVE LINE

TASK:	CK	PRIORITY
R & R Universal Joint and Drive Shaft		
R & R Constant Velocity Joint		
R & R Differential Assembly		
Overhaul Differential Assembly		
R & R Axle & Axle Bearing Seal		
R & R Clutch		
R & R Manual Transmission		
Overhaul Manual Transmission		
R & R Automatic Transmission		
Overhaul Automatic Transmission		
R & R Fluid, Filter, Seal and Gasket		
Adjust Bands		
Pressure Test Transmission		
Adjust Linkage		

I S S O E

January 1978

C1OE

AUTOMOTIVE MECHANICS TASK VERIFICATION FORM

Check below all tasks performed by automotive mechanics in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: BODY MECHANICAL

TASK:	CK	PRIORITY
Make Minor Exterior Body Adjustment on Station Wagon		
Make Windshield Wiper Repairs		
Make Minor Interior Body Adjustments		
Perform Major Door Alignment		
Perform Necessary Glass Adjustments		
Clean/Polish Interior Surfaces		
Clean and Polish the Exterior		
Clean and Treat Vinyl Top		

APPENDIX D

ISSOE OFFICE TRAINING TASK VERIFICATION FORM

1 5 5 0 5

January 1978

CIOE

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: BASIC SKILLS REFRESHER

TASK:	CK	PRIORITY
Use basic English skills		
Use basic arithmetic skills		

I S S O E

January 1978

CIOE

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: COMMUNICATION SKILLS

TASK:	CK	PRIORITY
Receive and accommodate visitors		
Use telephone systems and services		
Receive, route, and place telephone calls		
Compose a written communication		
Process incoming and outgoing communications and materials		

I S S O E

January 1978

CIOE

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: WORD PROCESSING

TASK:	CK	PRIORITY
Type an arranged business letter		
Type a long unarranged business letter		
Type a two-page unarranged business letter		
Type a medium-sized unarranged memorandum		
Type a hand written multiple addressed memorandum		
Type an arranged table		
Type a hand written, unarranged table		
Type a manuscript		
Record, revise, and playback multiple copies-source document		
Transcribe a business letter from recorded dictation		

I S S O E

January 1978

CIOE

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: FILING AND RETRIEVAL

TASK:	CK	PRIORITY
Alphabetize names for filing		
Arrange numerically for filing		
Arrange names geographically for filing		
Categorize by subject for filing		
Define filing terminology		
Organize, file, and retrieve correspondence		

I-S S O E

January 1978

CIOE

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: REPROGRAPHICS

TASK:	CK	PRIORITY
Prepare a spirit master and print copies		
Prepare a stencil and print copies		
Prepare a paper master and print copies		
Prepare a spirit or stencil master by using a copy machine		
Select proper duplication processes		

I S S O E

January 1978

C1OE

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: ADDING AND CALCULATING MACHINES

TASK:	CK	PRIORITY
Solve problems on the ten-key adding/listing machine		
Solve problems on the full-key adding/listing machine		
Solve problems on a ten-key electronic printing calculator		
Solve problems on the electronic display calculator		
Solve problems on the rotary calculator		

ISSOE

January 1978

CIOE

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: FINANCIAL AND RECORDKEEPING SYSTEMS

TASK:	CK	PRIORITY
Establish, maintain and replenish a petty cash fund		
Calculate a payroll		
Maintain checking account record		
Reconcile a bank statement		
Maintaining a stock inventory		
Complete purchasing and sales forms		

I S S O F

January 1978

CIOE

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: DATA PROCESSING

TASK:	CK	PRIORITY
Define data processing		
Describe standard punched card and uses of system		
Describe function of computer system - 5 basic units		
Define hardware and software		
Identify machine parts and functions		
Punch cards		
Develop and use a program card layout		

I S S O E

January 1978

C10E

OFFICE TRAINING TASK VERIFICATION FORM

Check below all tasks performed by personnel in office settings in your area. Also add any tasks not listed. Then identify each task according to the priority rating scale as follows:

(1) Needed by entry-level employees

(2) Desirable to have

(3) Not needed by entry-level employees

UNIT: EMPLOYABILITY

TASK:	CK	PRIORITY
Prepare letter of application and data sheet		
Orally communicate job qualifications in an interview		
Complete employment documentation		
Plot a tentative career path		

APPENDIX E

ISSOE

Regional Validations

Automotive Mechanics Respondents

I S S O E

REGIONAL VALIDATION

The Instructional Support System for Occupational Education (ISSOE) is designed to specify entry level job competencies in a number of occupational education areas. These job competencies are identifed as tasks and these tasks are elaborated as major objectives in the ISSOE system. This statewide effort is coordinated by the State Education Department. The curriculum content is being developed and refined by local teachers with the assistance of regional curriculum coordinators. To insure that the curriculum does, in fact, meet industry requirements, local advisory committee members and others reviewed the tasks, as they have been identified, to determine their appropriateness for new employees hired at entry level jobs.

Tasks of the ISSOE Automotive Mechanics program have been reviewed by the following during May, 1978.

Region IE

G. Paul Calisi
Island Chrysler-Plymouth Inc.
Patchogue, New York 11772

Jerry Jacobson
Babylon Chrysler
Babylon, New York

Peter Shaw
Garsten Motors Inc.
Riverhead, New York 11091

Floyd Vail
Treasurer
Vail Motor Corp.
Riverhead, New York

Region 1W

Donald Bergman, Owner
Wantagh Crown Service, Inc.
2240 Wantagh Avenue
Wantagh, New York 11793

Gus Burdi, Prop.
Franklin Square Automotive Service
735 Hempstead Turnpike
Franklin Square, New York 11010

Robert Carlock, Owner
Prospect Auto Repairs
993 Prospect Avenue
Westbury, New York 11590

Andrew Cecere, Jr., Owner
Andy and Terry Automotive
176 North Central Avenue
Valley Stream, New York 11580

Jack Cohen, Owner
Square Auto Parts
87 Franklin Avenue
Franklin Square, New York 11010

Community Repair Center
205 Jericho Turnpike
New Hyde Park, New York 11040

Cousins Gulf Service Station
500 Hillside Avenue
New Hyde Park, New York 11040

Anthony Dileonardo, Service Director
Bast Chevrolet
3660 Sunrise Highway
Seaford, New York 11783

F & M Canterbury Service Station
755 North Village Avenue
Rockville Centre, New York 11570

Joe Farro, Owner
Joe's Servicenter
Wantagn and Park Avenues
Wantagh, New York 11793

Mark Frabis
Service Manager
King Bear, Inc.
576 Uniondale Avenue
Uniondale, New York 11553

Mr. Frank, Owner
Frank's Sunoco Service
Route 25A
Northport, New York 11731

Pat Galagher, Owner
P.J.'s Exxon Service Station
New Hyde Park Rd. & Tulip Avenue
Franklin Square, New York 11010

Charles Gernovich, Mechanic
Warren's Shell Service Station
Franklin Avenue
Valley Stream, New York 11580

Earl Y. Gross, Owner
Earle's Automatic Transmission
Broadway & Railroad Avenues
Bethpage, New York 11714

John Gruntert, Owner
Gruntert Brothers Service
1610 Jericho Turnpike
Franklin Square, New York 11010

Douglas Haff, Manager
Ogden Brothers Garage
66 East Merrick Road
Freeport, New York 11520

D. Hassel, Shop Manager
Prospect Auto Repairs
993 Prospect Avenue
New Cassel, New York 11590

Harry Hassler
Service Manager
Wantagh Auto Sales, Inc.
3614 Sunrise Highway
Wantagh, New York 11793

Pete Howard, Service Director
Sunrise Chrysler-Plymouth
3588 Sunrise Highway
Wantagy, New York 11793

Ken Jones
Auto Shop Foreman
95 Cedar Street
Hicksville, New York 11801

Ralph Koplar, Mechanic
812 Premier Boulevard
New Hyde Park, New York 11040

Bob Lambito, Owner
Bob & Steve's Auto Repairs
175A Jerusalem Avenue
Massapequa, New York 11758

Vito Lanzigera, Service Manager
North Coast Subaru
112 Glen Street
Glen Cove, New York 11542

Meyer Lassee, Lead Mechanic
Tyler Motors
49 Glen Cove Avenue
Glen Cove, New YOrk 11542

Nick Lavista, Owner
Glen Cove Service Station
20 Cottage Row
Glen Cove, New York 11542

A. Loffredo, Mechanic
1301 Jericho Turnpike
New Hyde Park, New York 11040

William Madaleone, Owner
J & J Auto Service Center
511 Brunside Avenue
Inwood, New York 11806

Dennis Mandel, Service Manager
Don Wald Motors, Inc.
Route 59 and Ostrander Avenue
Riverhead, New York 11901

Ed Moser, Manager
Jaymarr Automotive
295 Central Avenue
Bethpage, New York 11714

Jack McCoy, Manager
Chevrolet
133 Dickinson Avenue
East Northport, New York 11731

John Nobile, Mechanic
Frank's Sunoco Service
Route 25A
Northport, New York 11731

David O'Donnell
Assistant Service Manager
Majestic Chevrolet
East Sunrise Highway
Freeport, New York 11520

Harry Ogden, Owner
Ogden Brothers Garage
66 East Merrick Road
Freeport, New York 11520

Robert Olsen
Service Manager
S & R Lincoln Mercury
638 Sunrise Highway
Rockville Centre, New York 11570

Frank Patriss, Owner
Joe's Serviceenter
Wantagh and Park Avenues
Wantagh, New York 11793

Robert J. Paulik, Service Manager
Cadillac
169 West Sunrise Highway
Freeport, New York 11520

Ron Perjon, Manager
Gibraltar Transmission
1931 Wantagh Avenue
Wantagh, New York 11793

Phil Poli, Owner
Philmor Discount Inc.
38 West Sunrise Highway
Valley Stream, New York 11580

Mike Repoli
Hassett Lincoln Mercury Inc.
3530 Sunrise Highway
Wantagh, New York 11793

Paul Rocco, Owner
Be Sure Auto Service
1660 Old Country Road
Bethpage, New York 11714

Tim Rogers, Mechanic
P.J.'s Exxon Service Station
New Hyde Park Road & Tulip Avenue
Franklin Square, New York 11010

Michael Romeo, Owner
Romeo's Service Station
3458 Merrick Road
Seaford, New York 11783

John Rotundi, Owner
John Rotundi Inc.
123 Franklin Avenue

Roy's Sunoco Service
Larkfield Road
East Northport, New York 11731

Fred Scaglione, Manager
F & M Auto Service
580 Hempstead Turnpike
West Hempstead, New York 11552

Michael Schenkman, Owner
Schenkman Repair Service
133-28 41st Avenue
Flushing, New York 11355

Harry B. Schloss, Owner
Franklin Corona Servicenter
758 Franklin Avenue
Valley Stream, New York 11580

Tom Scott, Mechanic
Ogden Brothers Garage
66 West Merrick Road
Freeport, New York 11520

Scranton Auto Center
1051 Rockaway Avenue
Valley Stream, New York 11581

Vic Surico, Service Manager
Stern Motors of Freeport, Inc.
146 West Sunrise Highway
Freeport, New York 11520

Tilden Brakes
307 Hempstead Turnpike
West Hempstead, New York 11552

Eugene Tullio, Owner
Prospect Auto Repairs
1136 Prospect Avenue
Westbury, New York 11590

Two Brothers Auto Repair
Div. 80 East Merrick Road
Freeport, New York 11520

Alfred Tyezkroski, Shop Foreman
Don Wald Motors, Inc.
Route 59 & Ostrander Avenue
Riverhead, New York 11901

Marons Valicent, Service Manager
Tyler Motors
49 Glen Cove Avenue
Glen Cove, New York 11542

William Walkins, Jr., Owner
Action Auto Clinic
107 Wantagh Avenue
Bethpage, New York 11714

Region 2

Frank DiMaggio
Owner-Mechanic
Park Trans
4367 Third Avenue
Bronk, New York

Saul Kander, Owner
Clearview Auto Glass Co.
2137 Utica Avenue
Brooklyn, N.Y. 11234

Mel Meltzer
Main Superintendent
Van Guard Bus Lines
115 Waverly Road
Ossining, New York

Gerold E. Nasi
Foreman
Bronx State Hospital
1500 Waters Place
Bronx, New York

Paul Norman, Director
General Motors Training Center
Broadway and Paulding
Tarrytown, New York

Lou Palumbaro
Foreman
North East Auto Spring
25 Sherman Place
Ossining, New York

Martin Rothman, Owner
Roth Co Corp.
51-01 Northern Blvd.
Woodside, New York

Anthony Simone
Main Superintendent
New York Bus Service
3225 Hutchinson River Road
Bronx, New York

Region 3N

Ken Boersema, Owner
Glen Volkswagon
Rt. 17 M
Middletown, New York

Ronald Rudy, Owner
Glen Volkswagon
Rt. 17 M
Middletown, New York

Joe Smith, Owner
Robin Motors
Rt. 211W
Middletown, New York

Region 3S

Paul C. Papitto, Service Mgr.
Central Ave. Chrysler
1839 Central Avenue
Yonkers, N.Y. 10710

John Ruffino, Service Manager
Park L & M Inc.
636 South Broadway
Yonkers, N.Y. 10705

W. Smith, Owner
Bill's Commercial Towing
41 Torre Place
Yonkers, N.Y.

Mr. Tobias, President
Tobias Auto Sales Corp.
1 Bridge Street
Yonkers, New York

Mr. J. Valentino, Owner
Pelton Service Station
67 McLean Avenue
Yonkers New York

Jack Vetrano, Retail Foreman
Fairbanks Motors, Inc.
29 Agar Street
Yonkers, New York

Region 4

Al Archumbauct
Al's Service Center
Hudson Falls, New York 12839

Ralph R. Arnold
Dix Garage, Inc.
Hudson Falls, New York 12839

Harry Gochee
Gochee's Garage, Inc.
Delmar, New York 12054

John E. Haney
Haney Bros. Gulf
Mechanicsville, New York

Joseph Head
Head Sales and Service
Rt. 145 N
Lawyersville, New York

Howard E. Johnson
March Hallman Chevrolet
Albany, New York

Dale Lang
Lang's Automotive
Amsterdam, New York 12010

Gary McMaster
State Auto Imports
Schenectady, New York 12306

David D. Montana
Montana's Service Station
Scotia, New York 12302

William M. Noonan
Queensbury Motor Inc.
Glens Falls, New York 12801

Robert Phillips
Hosher Motors, Inc.
Amsterdam, New York 12010

Warren Roosevelt
MW Roosevelt & Son Chevrolet
Palatine Bridge, New York

William M. Schanz
Schanz Servicenter
Menands, New York

William Woehrmann
Capital Buick Company
Albany, New York

Don Young
Ford Garage Co., Inc.
Glens Falls, New York 12801

Region 6

Jim Blackwell, Mechanic
Antonilli Tire Co.
278 State Street
Carthage, New York 13619

Thomas Chensey, Vice President
Dennis Cheny & Son Inc.
Corner State & Central Sts.
Watertown, New York 13601

Anthony J. Condino, Manager
D. Condino Motors
State Street
Carthage, New York 13619

Carlton F. Covey Partner
Covey's Garage
1012 Alex St.
Carthage, New York 13619

Douglas E. Cronk, Mechanic
5025 RD 3, Dry Hill
Watertown, New York 13601

John Dorr, Owner
Dorr's Body Shop
Limerick, New York

Richard Door, Mechanic
Superior Street
Watertown, New York 13601

Robert Dougall
Assistant Store Manager
Skelly Tire Center
501 State Street
Odgensburg, New York 13669

Gary G. Dupree, Bridge Manager
Ogdensburg Bridge & Part Autho.
Bridge Plaza
Ogdensburg, New York 13669

Stanley J. Gepiel III
Jay Chevrolet & Olds, Inc.
Utica Blvd.
Boonville, New York 13309

William Groff, Mechanic
Gibbs & MacIvenie, Inc.
Main Street
Adams, New York

Robert Hale, Store Manager
Antonelli Tire Sale
278 State Street
Carthage, New York 13619

James E. Hamland, Mechanic
Keds Garage
Watertown, New York 13601

John J. Hardter, Mechanic
Quick Motors, Inc.
1000 Coffeen St.
Watertown, New York 13601

Dave Hill, Head Mechanic
Mulligan Service Station
State Street
Lowville, New York

Richard L. Hodge, Service Manager
Nichols Co. #40
Arsenal St., Coleman Avenue
Watertown, New York 13601

Mr. Johnson
Johnson's Arco
16 Bridge Street
Carthage, New York 13619

Edison R. Jordol, General Mechanic
Gibbs & MacInvenie Inc.
Main Street
Adams, New York

James Manzer, Owner
Manzers Garage
519 Main Street
Groghen, New York 13327

Donald F. Morse, President
Lowville Motors Sales Inc.
7636 State Street
Lowville, New York

Mark Palmer, Service Manager
Palmer Motors
RD #3, Outer Washington St.
Watertown, New York 13601

Francis Roncier, Owner
Gulf Oil Cor.
426 State Street
Carthage, New York

Laurence Sarkin, President
Nates Auto Parts Inc.
1301 State Street
Odgensburg, New York 13669

Fred Shurtheff, Owner
Fred Shurtheff Inc.
1111 Patterson Street
Odgensburg, New York 13669

Region 6 contd.

Mike Sullivan, Mechanic
Burkarts Garage
5578 Shady Avenue
Lowville, New York

James Williams
General Auto Mechanic
Gibbs & MacInvenie, Inc.
Rt. 11
Adams, New York

George Youngs, Head Mechanic
Tony's Gulf Service
Brown & Bradly Streets
Dexter, New York

Region 8

William Bsrtlett, Service Manager
Parkway Auto
Vestal Parkway East
Vestal, New York

Bill Cioccari, Mechanic
C & M Motors
Stamford, New York 12167

Stuart DeLand, Owner
De Land's Texaco
Pine Woods, New York

Ira Fyfe, Mechanic
C & M Motors
Stamford, New York 12167

David Hibbard
Inspector and Tester
NYS Department of Transportation
59 Montgomery Street
Binghamton, New York

Williams Kilts
Service Manager
Gault Chevy Co.
2507 North Street
Endwell, New York

Howard Maas, Owner
Howard Maas Garage
23 McKinley Avenue
Endicott, New York 13760

Karl Newman
Service Manager
Best Pontiac-Toyota-Jeep
2301 E. Main Street
Endwell, New York

John Wolcott
Service Manager
Botnick Motor Corp.
179 Front Street
Binghamton, New York 13905

Region 9N

John Calverase
Calverase Auto Services, Inc.
West First Street
Oswego, New York 13126

Arthur Gearsbeck
Gearsbeck Sunoco
Route 49
West Monroe, New York 13167

Donald Kipley
Cooper Ford
West Genesee Street
Baldwinsville, New York 13027

Charles Lesser
Breese Chevrolet
604 Old Liverpool Road
Liverpool, New York 13088

Ross Relyea
Dave Bali Chevrolet
650 South Salina Street
Syracuse, New York 13202

Reymore Chevrolet
Route 11
Central Square, New York 13036

Donald Rhoades
Rhoades Service
140 Mildred Avenue
Syracuse, New York 13206

Larry Rodney
Seneca Auto Parts
64 East Genesee Street
Baldwinsville, New York 13027

Ron Tibbits
Feldman Brothers Garage
116 South Midler Avenue
Syracuse, New York 13206

Bob Williams
Williams Garage
Erie Boulevard
Chittennango, New York 13037

Dick Wise
East Syracuse Chevrolet
216 West Manlius Street
East Syracuse, New York 13057

Region 9S

Ed Aldrich
Cooke Cadillac Olds
Triphammer Shopping Center
Ithaca, New York 14850

Ray Bacan
Dick's Specialities
Genesee Street
Auburn, New York 13021

Robert Delaney
Delaney's Auto Service
Auburn, New York 13021

Anthony J. Dovi, Jr.
Dovi Lincoln-Mercury
Cortland, New York 13045

Robert Fisher
Service Manager
Buono Dodge
Cortland, New York 13045

Frank Peabody
Frank's Amoco Service Center
Seneca & Albany Streets
Ithaca, New York 14850

Region 10

Milan Beh
Milan Beh's Texaco
4051 Ridge Road
Williamson, New York

Jun Brecenhon
Service Manager
A.R.A. Vending Machine

Richard Cleveland
Cleveland Ariel Service
Geneseo, New York

Robert DeBruycker
Mechanic
NYS Dept. of Environmental Conservation
6274 E. Avon-Lima Road
Avon, New York

Donovan Walton
Service Manager
D'Anico Chevy-Plymouth
Geneva, New York

Thomas Elliott
Service Manager
Pitts-Ford
Route 104
Williamson, New York

Helbig's Mobil Service
500 Whitney Road
Penfield, New York 14526

Mulkin Chevy-Olds
Brockport,
New York

Richard N. Moore
Service Manager
Muin Chevrolet
Oakfield, New York

Sonny Robinson
Robinson's Garage
7200 Palmyra

Robert Phillips
Mechanic
7289 Lake Road
Bergen, New York 14416

John Schiano
Schiano Chrysler-Plymouth
Geneseo, New York 14454

Ronald Smith, Manager
9052 Allegheny Road
Corfu, New York 14036

Robert Taylor, Sales Manager
Mancuso Markets
229 Main Street
Batavia, New York 14020

Tyman Ford
Canandaigua, New York

Curt Swift
Shop Foreman
Vincent Buick

Allan Whitcomb
Service Manager
Hallman's
East Avenue
Rochester, New York

Zimmerman Oldsmobile
13090 Main Road
Akron, New York 14001

Region 12

Mr. Chicbocki, Operator
Chicbocki's Arco
1051 Union Road
W. Seneca, New York

Louis Schmitt
Service Manager
Schmidt's Garage
5255 Genesee Street
Bowmansville, New York

Norm Grapes, President
Grapes Sunoco
4205 Del. Ave.
Ton.

APPENDIX F

ISSOE

Regional Validations

Office Training Respondents

I S S O E

REGIONAL VALIDATION

The Instructional Support System for Occupational Education (ISSOE) is designed to specify entry level job competencies in a number of occupational education areas. These job competencies are identified as tasks and these tasks are elaborated as major objectives in the ISSOE system. This statewide effort is coordinated by the State Education Department. The curriculum content is being developed and refined by local teachers with the assistance of regional curriculum coordinators. To insure that the curriculum does, in fact, meet industry requirements, local advisory commttee members and others reviewed the tasks, as they have been identified, to determine their appropriateness for new employees hired at entry level jobs.

Tasks of the ISSOE Office Training program have been reviewed by the following during May, 1978:

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Stony Brook, N.Y 11790

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Personnel Employee Benefits Mgr.
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Bohemia, N.Y. 11716

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New York Twist Drill Company
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Region 1W

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Syosset Central School District
Syosset High School
Syosset, New York 11791

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150 Broadway
New York, New York

Allstate Insurance Company
Huntington Quadrange South
Huntington Station, N.Y. 11746

Berkeley-Claremont Secretarial School
99 North Broadway
Hicksville, New York 11801

Biba Hairstylists
125 North Broadway
Hicksville, New York 11801

Chris Bulon
GEICO
750 Woodbury Road
Woodbury, New York 11797

G. Fried Carpet
800 Old Country Road
Westbury, New York 11590

Computi-Tech
Sea Cliff
New York 11579

Mr. Corso
Printing Emporium
25 Merrick Avenue
Merrick, New York 11566

Drug, Cosmetics & Beauty Trade Services
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Mineola, New York 11501

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Five Towns College
Merrick Avenue
Merrick, New York 11566

European American Bank
865 Merrick Avenue
Westbury, New York 11590

Foodtown
Atlantic Avenue
East Rockaway, New York 11518

Mrs. Frances
Chemical Bank
2680 Merrick Road
Bellmore, New York 11710

Franklin General Hospital
900 Franklin Avenue
Valley Stream, New York 11580

Garden City Claim Service
254 Nassau Boulevard
Garden City South, New York 11530

Anne Geadding
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Griggs, Baldwin and Baldwin
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Garden City, New York 11530

International Ladies Garment Workers
Union - Local 91
100 East 17th Street
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Jamaica Savings Bank
303 Merrick Road
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Jay Norris Mailing House
31 Hanse Avenue
Freeport, New York 11520

Jerico Chemical Company
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Maloney Commodities
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Nancy Guingo
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Sue Musacchio
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First National Bank of Cortland

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State University at Cortland

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Columbian Rope Company

Norma L Shultz
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Auburn Memorial Hospital

Lester VanDyke
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Executive Secretary
Morris Pumps, Inc.

Executive Secretary
Dr. Freeman
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Region 10

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Greece Athena High School

Ann Muto
Secretary
First Federal Savings and Loan

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Chief Industrial Engineer
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Durkee Foods
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Corporate Personnel Manager
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APPENDIX G

REGIONAL VALIDATION PROCESS

SURVEY-REGIONAL COORDINATORS' ROLE

ISSOE

SURVEY: REGIONAL VALIDATION PROCESS

Please complete and return to Al Edsall, ISSOE Project Director, Cornell Institute for Occupational Education, Stone Hall, Cornell University, Ithaca, New York 14853 (envelope enclosed) by July 31, 1978.

1. Contacts to employers for them to complete the survey was made by:

   ____a. ISSOE Regional Coordinator

   ____b. Advisory Committee Member

   ____c. Teachers

   ____d. Students

   ____e. Combination of above - Explain_____

   ____f. Other - Explain_____

2. Approximately how much time was spent in making employers aware of ISSOE, purposes of validation, etc. before they completed the survey form (orientation)?

   ____a. None

   ____b. 0 - 10 minutes

   ____c. 10 - 30 minutes

   ____d. 30 - 60 minutes

   ____e. More than one hour

3. Orientation for employers was conducted by:

   ____a. ISSOE Regional Coordinator

   ____b. Teachers

   ____c. Administration

   ____d. Students

   ____e. Advisory Committee Members

   ____f. Other - Explain_____

4. Assistance from teachers was:

   ____a. Very valuable

   ____b. Valuable

   ____c. Less than desirable

   ____d. Not available

   ____e. Not requested

5. Assistance from local advisory, craft, or trade program committee was:

____a. Very valuable

____b. Valuable

____c. Less than desirable

____d. Not available

____e. Not requested

6. Assistance from administration was:

____a. Very valuable

____b. Valuable

____c. Less than desirable

____d. Not available

____e. Not requested

7. Participation by employers was:

____a. Very cooperative

____b. Cooperative ____% did not cooperate when requested

____c. Uncooperative

8. Validation forms were:

____a. Mailed to employers

____b. Hand carried to employers

____c. Employers met at central location

____d. Other - Explain _____

9. Approximately how much time did you spend:

____a. Hours in preparation for conducting survey

____b. Hours conducting survey

____c. Hours summarizing survey data

10. Value of instructions included with validation package (from CIOE):

____a. Very helpful

____b. Good

____c. Some value

____d. No value

11. List other benefits received from the regional validation process.

_____

_____

12. Can you suggest other strategies for improving the validation process.

_____

_____

_____

Cornell
Institute for
Occupational
Education

Department
of Education
Cornell University

ISSOE

STUDENT REPORTING SYSTEM GUIDE

in cooperation with

The Office of Occupational Education, New York
State Education Department, University of the
State of New York, Albany, New York

August 1978

The New York State College of Agriculture and Life Sciences, a Statutory College of the State University at Cornell University, Ithaca, NY 14853.

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Preface

This document was developed as a guide to explain the proposed Student Reporting System for ISSOE.

The statewide ISSOE effort affords an opportunity for New York to provide leadership and direction in developing a meaningful system for reporting student progress in CBVE programs.

It appears that New York is the only state at present with a major effort successful in providing statewide uniformity in CBVE programs. This uniformity facilitates the development of a statewide student reporting system that provides for local and state reporting needs.

Many people assisted in the development of the ISSOE student reporting system. Special thanks is due the members of the ISSOE Steering Committee at CIOE, the thirteen teachers who submitted data to pilot test the system and involved members from the State Education Department.

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ISSOE STUDENT REPORTING SYSTEM

INTRODUCTION TO ISSOE

An Instructional Support System for Occupational Education (ISSOE) has been designed to support and facilitate instruction by systematizing those auxiliary functions which are essential to occupat' nal programs--monitoring, reporting and evaluating. ISSOE operates on several levels simultaneously: individual student achievement can be reported, class progress can be monitored, and entire programs can be evaluated. Monitoring, reporting and evaluating all rest upon the same data base: the records of the individual students generated at the classroom level.

ISSOE rests upon a performance-based modularized curriculum as a basis for reporting the achievement of individual students. The uniform curriculum format provides compatibility for programs across the state both within a program area and across program areas.

The ISSOE curriculum package is a concise compendium of objectives which lead to employability in the world of work. These objectives have been based on task analyses, the judgement of experienced teachers, and are employer validated. They are written in behavioral terms to provide a criterion-referenced testing system. Related objectives have been arranged in modules to facilitate instructional planning.

The Instructional Support System for Occupational Education recognizes the teacher and the student as the center of the learning process. ISSOE helps teachers do their professional job by assisting them in identifying competencies to be taught in student performance terms at a standard or criterion recognized by employers. Student progress is reported on an individual basis and competencies accumulate toward an employment preparation goal. As the student moves through a program, information on achievement will be available for counseling, further education, or employment, regardless of when or where the student learned the competencies.

By traditional definitions, the ISSOE package is not a complete curriculum. It does not attempt to specify all the experience students should have under the guidance of teachers. The instructor can make allowances for individual differences or students with special abilities. This separation of curriculum and instruction seems particularly appropriate for occupational education.

Coordination of ISSOE is provided by the Office of Occupational Education, New York State Education Department.

Rationale

Practical considerations demand that a working model of a reporting system for ISSOE be developed, tested and implemented. This system to provide informational support at the instructional level in a way that is compatible with a Comprehensive Information Management System for Occupational Education in New York State. Since ISSOE is included in a larger integrated information system, it is necessary to develop consistent sound code methodologies which will function to merge the necessary data elements with meaningful information outputs.

A major emphasis of the ISSOE concept is to build student profiles that will reflect competencies students' have gained in occupational areas. In order to build and maintain these profiles, it is necessary to institute a student reporting system for ISSOE. The system requires uniform outputs for statewide application. Competencies attained should relate to business and industrial needs. Therefore, the reporting system must record data and assemble information that is acceptable to the work community as well as the education community.

As a CBVE program, student achievement in ISSOE programs is based on attainment or mastering or curriculum competencies.....these curriculum competencies, or major objectives, in the ISSOE effort have been or will be employer validated to determine their appropriateness for entry-level employment needs.

With minimum orientation employers understood the tasks (abbreviated major objectives) of the ISSOE Auto Mechanics and Office Training programs and rated them regarding those needed by entry-level employees. This indicates a potential for improved education, industry and community relationships.

These competencies will also provide answers for the single point most vlnerable to attack by critics of vocational education - "Neither the Federal Government nor most states have any idea of the actual competencies of Vocational Education graduates when they complete their programs." (A. Lee, Learning a Living Across the Nation, Vol. 5).

ISSOE will provide answers to what occupational education programs are supposed to do and the ISSOE Student Reporting System will provide data to determine if they are succeeding in doing it.

Development of ISSOE Student Reporting System

A Steering Committee for the ISSOE effort at CIOE was formed to provide a broad base of input and direction in developing a student reporting system for ISSOE. The recommended system is a result of a general consensus of the steering committee. Members of this committee are listed in Appendix A.

It is planned that the Manual Sort Student Reporting System for ISSOE will be field tested during the 1978-79 school year at three or more BOCES Occupational Centers or Comprehensive schools. The field test to be conducted utilizing at least two of the ISSOE occupational programs judged to be most advanced regarding statewide consensus on program major objectives.

Criteria for selecting sites to be:

- Participation in ISSOE during 1977-78.
- Teachers selected utilizing the ISSOE mode.
- Support from school administrations to participate in the research effort.

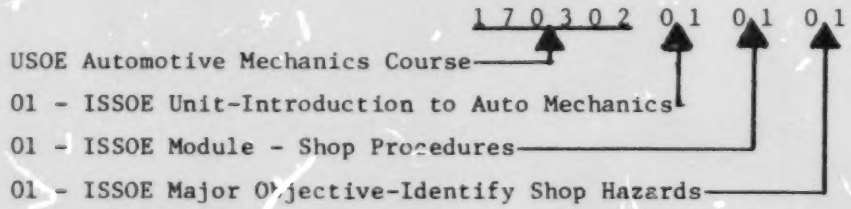
An orientation-work session to be provided for personnel who become involved in the field testing phase of the ISSOE Student Reporting System.

Test data was collected from 13 teachers to pilot the system during 1977-78. This data was manually processed at CIOE and the information was returned to the teachers to obtain their opinions regarding usefulness of the information and output forms

Teachers generally found the information useful in displaying a class progress chart, a student competency performance record and student progress profiles utilizing the DOT job titles. Some indicated an orientation to the use of DOT job titles is needed. (A sample class report is attached as Appendix B.)

The ISSOE system utilizes the USOE coding system to categorize programs. The system also recognizes the unit, module and major objective. The major objective is the key in the system to organize competencies.

Example:


1 7 0 3 0 2 0 1 0 1 0 1
USOE Automotive Mechanics Course
01 - ISSOE Unit-Introduction to Auto Mechanics
01 - ISSOE Module - Shop Procedures
01 - ISSOE Major Objective-Identify Shop Hazards

Characteristics of Student Reporting System for ISSOE

The ISSOE student reporting system to have the following characteristics:

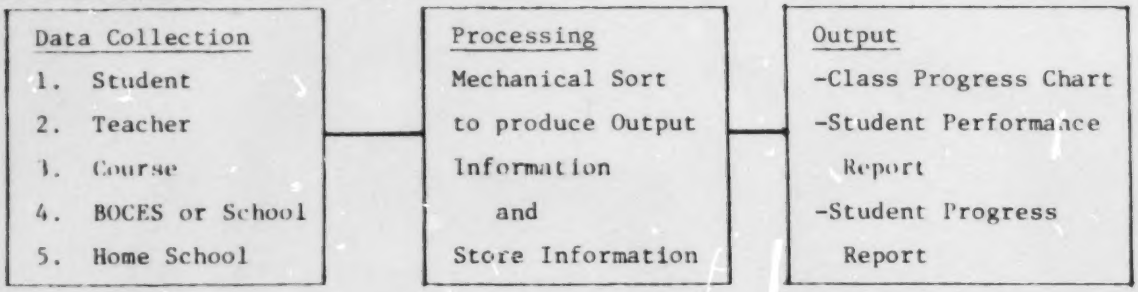
- Open access to authorized users.
- Prohibit use by unauthorized users.
- Meet state and federal regulations regarding confidentiality of information.
- Provide for rapid access.
- Allow for frequent update.
- Have erase safe-guards.
- Use appropriate output formats.
- Cross-coding capability.
- Provide efficient and economical reporting.
- Require minimal input time for instructors.
- Rapid retrieval capabilities.
- Be compatible with other state reporting systems.
- Be compatible with the Comprehensive Information Management System for Occupational Education in New York State.
- Access inputs from non-traditional settings on demand.
- Provide individual student progress output.
- Provide class progress data on demand.
- Provide other appropriate outputs.

Functions of a Student Reporting System

An optimal student reporting system for ISSOE would:

1. provide adequate collection procedures to obtain accurate and current information regarding numbers of students and their individual, as well as collective, progress in occupational education programs.
2. provide an accurate listing of actual competencies possessed by students, graduates, or leavers of occupational education programs.
3. provide an indication of the level of proficiency of competencies achieved by students in occupational education programs.
4. provide a system to gather base data to determine if competencies learned in occupational education programs qualify students for employment.
5. provide a list of competencies a student has achieved so that an employer has clear-concise information to determine if the student is prepared for employment.
6. provide information regarding trained people to assist in matching supply with demand-locally, regionally, and statewide.
7. provide adequate information regarding competencies attained by target populations - such as courses and programs in which each group is concentrated, completion and drop-out rates, job placement rates, trends, etc.
8. provide data on traget populations in terms of numbers and percentages of each who are trained and employed or want to be employed in fields for which they were trained.
9. provide base information regarding success of women or of different minority ethnic groups in occupational education.
10. provide an improved basis for the guidance and counseling process for occupational students.
11. provide a base for program evaluation by providing improved quantative data regarding achievement of competencies by students.
12. provide a more equitable base of determining if students found employment in occupations related to their training since program competencies can relate to many occupations.
13. provide standard base data to be used for evaluating other curricular approaches.
14. provide information for curriculum revision.

Data Collection and Output Flow



Three alternative methods of data collection will be tested during 1978-79 to determine the feasibility of each approach.

Alternatives

A. Data collected each week.

Data forwarded to the collection center at the end of each week. Data to be processed and information returned once per marking period except for special requests. The collection can be by phone or mail.

B. Data collection each month.

Data forwarded to collection center at the end of each month. Data to be processed and information returned each month or returned once each marking period.

C. Data collected each marking period.

Data forwarded to the collection center at the end of each marking period. Data processed and information returned once each marking period.

Data Input Flows

The following two forms are recommended as data input forms. The modified Class Progress Chart is the preferred mode as the data input instrument. This would require one input sheet per class as compared to one input sheet per student if Individual Student Progress Sheets are used.

A. Modified Class Progress Chart.

B. Individual Student Progress Sheet.

Receiving Center Process

A. Receive Student Data Sheet---Categorize and File

B. Transfer data to appropriate forms

1. Class Progress Chart
2. Student Performance Record
3. Student Progress Record

4. Identify for recording and filing by region, county, supervisory school unit, course, teacher and student.

5. Duplicate copies — Copies for:
   a. Class Progress Chart - Teacher-Guidance-Administration
   b. Student Performance Record - Student-Teacher-Guidance-Administration
   c. Student Progress Record - Student-Teacher-Guidance

6. Mail
   Assemble and Mail

7. File Originals (Refer to 2.a)

C. Additional Marking Periods
   a. Process as in Item #2
      Update:
      - Class Progress Chart
      - Student Performance Record
      - Student Progress Record
   b. File for leavers

Assessment Rating

Students, educators, employers and others are interested in the quality of work performed in occupational education programs. To provide information regarding the quality of performance, the following assessment rating has been developed for the ISSOE Student Reporting System.

10. Outstanding Performance - Performs task without supervision or assistance and can lead others in performing it. Has initiative and adaptability to special problem situations. Follows accepted procedure. Carefully observes all safety precautions. Produces excellent work.

9. Very Good Performance - Performs task without supervision or assistance with proficiency in speed and quality. Follows accepted procedures. Observes all safety precautions. Uses tools and equipment correctly.

8. Standard Performance - Performs task satisfactorily without assistance or supervision. Follows correct procedures in most details. Observes major safety precautions. Uses tools and equipment correctly. Produces quality work.

7. Fair Performance - Performs task satisfactorily but requires periodic supervision and/or assistance. Usually follows accepted procedures. Observes major safety precautions. Generally uses tools and equipment correctly.

6.5 Meets Minimum Requirements - Performs task, but requires considerable supervision and/or assistance. Works meets acceptable standards.

Formats

Input:

Student Reporting Form

Automotive Mechanics

Office Training

Output:

1. Class Progress Chart
   - Automotive Mechanics
   - Office Training
2. Student Performance Report
   - Automotive Mechanics
   - Office Training
3. Student Progress Report*
   - Automotive Mechanics
   - Office Training
4. Student Record of Achievement
   (To be dated and initialed by teacher)
   - Automotive Mechanics
   - Office Training

*Sample DOT job titles are attached for the Automotive Mechanics and Office Training subject areas. Additional DOT job titles are needed for each area to complete the system. The appropriate job titles to be used need to be determined by a committee composed of representatives of Occupational Education, business and industrial concerns, New York State Department of Labor, and other appropriate individuals knowledgeable about DOT job classifications.

I S S O E

AUTOMOTIVE MECHANICS PROGRAM 170302
STUDENT REPORTING FORM

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____

STUDENT:	HOME SCHOOL	010101 Identify Shop Hazards	010201 Identify Personal Safety	010301 Fill Out Job Application	010401 Select Personal Goals	010501 Identify/Use Hand Tools	010601 Identify Shop Power Equip.	010602 Lift Vehicle	010701 Change Engine Oil/Filter	010702 Lubricate Chassis	010801 Repack Front Wheel Bearings	010901 Rotate Tires	010902 Repair Leaking Tire	010903 Balance Wheels	020101 R/R Brake Shoes	020102 R/R Parking Brake Shoes	020201 R/R Disc Brake Cable	020301 R/R Disc Brake Caliper	020302 R/R Brake Lines	020303 R/R Wheel Cylinder	020304 R/R Master Cylinder	020305 R/R Power Brake Asst. Unit	020306 R/R Proportioning Valve	020307 Overhaul a Cylinder	020308 Recondition Wheel Cylinder	020309 Overhaul Disc Brake Cylinder	020310 Machine Disc Brake Drums	020401 Machine Brake Cylinder	020402 R/R Shock Absorber	020403 Measure Standing Height	020404 Check Front End for Wear	020405 R/R Front End Linkage	020406 R/R Ball Joints	020407 R/R Control Arms	020408 R/R Coil Springs	020409 R/R Leaf Springs	020501 R/R Torsion Bar	020601 Perform State Inspection	Adjust Front End
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I S S O E

AUTOMOTIVE MECHANICS PROGRAM 170302
STUDENT REPORTING FORM

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____

STUDENT:	HOME SCHOOL	020701 Adjust Pitman Arm Preload	020702 Check Oil Pressure	020703 R/R Power Steering Hose	020704 R/R Power Steering Pump	020705 R/R Steering Box	030101 Inspect/Test Cool.System	030102 Drain/Flush/Refill C.S.	030103 R/R Minor Pts.Cool System	030104 R/R Major Pts.Cool System	030201 Service Carburetor	030202 Overhaul Carbur.1-Barrell	030203 Overhaul Carbur.2-Barrell	030204 Overhaul Carbur. 4-Barrell	030301 Service Fuel Stor/Del.Sys.	030401 Service Fuel Inj.System	030501 Test Primary Ign.Circuit	030502 Replace/Adjust Prim.Cir.	030503 Overhaul Distributor	030601 Service Ign.Sec.Comp.	030701 Perform Minor Tune-up	030702 Connect/Program Analyscope	030703 Diagnose Eng.Electronically	030801 Diagnose Autolite Elect.	030802 R/R Comp.Autolite Ign.Sys.	030803 Test Comp.Chrysler Ign.Sys.	030804 Test GM "HEI" Dist.Coil	030901 R/R Minor Pts.Exhaust Sys.	030902 R/R Major Pts. Exhaust Sys.	031001 Identify/Test Emission Ctr	031101 Service Timing Chain/Cams.	031102 Service Piston/Rings	031103 R/R Crankshaft	031104 Machine the Short Block	031201 R/R Rocker Arms	031202 R/R cylinder Head	031203 Service Cylinder Head	040101 Test Electrical System	040102 R/R Comp.Lighting System	040201 Start Eng.w/Booster Cable
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I S S O E

AUTOMOTIVE MECHANICS PROGRAM 170302
STUDENT REPORTING FORM

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____

STUDENT:	HOME SCHOOL	040202 Service/Test Battery	040301 Test,R/R Comp.Charge Syst.	040302 Test/Overhaul Alternator	040401 Test,Diagnose, Start Sys.	040402 Overhaul Starter	040501 Test Instruments	040502 R/R Indicators	040601 Test,R/R Power Antenna	040602 Test, R/R Power Seats	040603 Test, R/R Power Windows	050101 R/R Univ.Joint/Drive Shaft	050103 R/R Constant Velocity Joint	050201 R/R Differential Assembly	050202 Overhaul Diff.Assembly	050203 R/R Axle & Bearing Seal	050301 R/R Clutch	050401 R/R Manual Transmission	050402 Overhaul Manual Trans.	050501 R/R Automatic Transmission	050502 Overhaul Automatic Trans.	050503 R/R Fluid,Filter,Seal,Gas.	050504 Adjust Bands	050505 Adjust Linkage	050506 Pressure Test Transmission	060101 Make Minor Ext.Adj.S/W	060102 Make Windshield Wiper Rep.	060103 Make Minor Int.Body Adj.	060104 Perform Major Door Adj.	060201 Perform Nec.Glass Adj.	060301 Clean/Polish Interior	060401 Clean/Polish Exterior	060402 Clean/Treat Vinyl Top	070101 Service/Test Heater	070201 Test Air Conditioner	070202 Evacuate/Charge Air Cond.	070203 R/R Components	070204 Overhaul Air Cond.Compres.	070301 Test/Adjust Speed Control	070401 Test,R/R Rear Defogger
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I S S O E

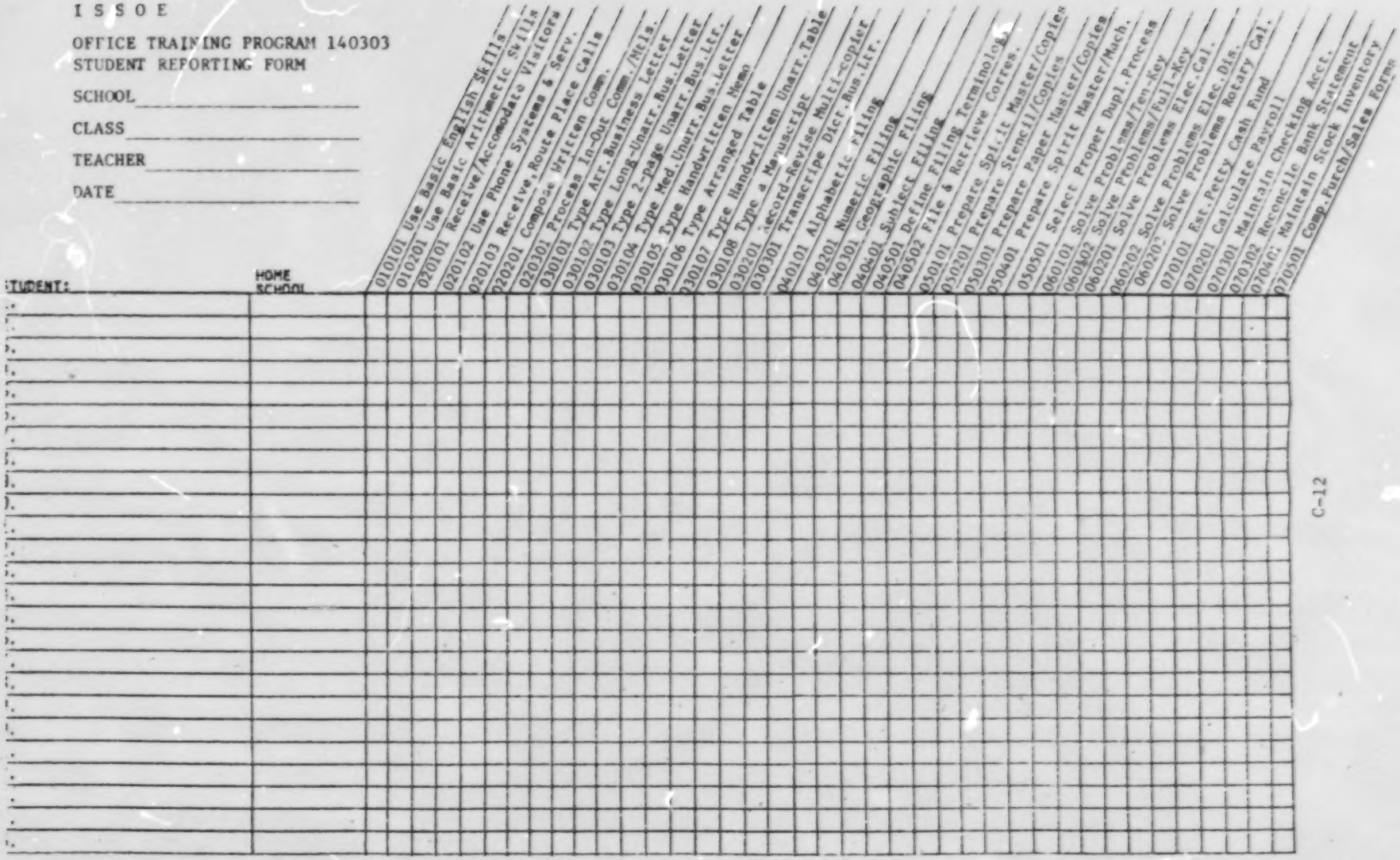
OFFICE TRAINING PROGRAM 140303
STUDENT REPORTING FORM

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____


STUDENT:
HOME SCHOOL
010101 Use Basic English Skills
010201 Use Basic Arithmetic Skills
020101 Receive/Accomodate Visitors
020102 Use Phone Systems & Serv.
020103 Receive, Route Place Calls
020201 Compose Written Comm.
030101 Process In-Out Comm./Mtls.
030102 Type Arr. Business Letter
030103 Type Long-Unarr. Bus. Letter
030104 Type 2-page Unarr. Bus. Letter
030105 Type Med. Unarr. Bus. Ltr.
030106 Type Handwritten Memo
030107 Type Arranged Table
030108 Type Handwritten Table
030201 Type a Manuscript
030301 Transcribe Unarr. Table
040101 Alphabetic Filing
040201 Numeric Filing
040301 Geographic Filing
040401 Subject Filing
040501 Define Filing Terminology
040502 File & Retrieve Corres.
050101 Prepare Spl. It Master/Copies
050201 Prepare Stencil/Copies
050301 Prepare Paper Master/Copies
050401 Prepare Spirit Master/Copies
050501 Select Proper Dupl. Mach.
060101 Solve Problems/Ten-Key
060102 Solve Problems/Full-Key
060201 Solve Problems Elec. Cal.
060202 Solve Problems Elec. Dis.
060203 Solve Problems Rotary Cal.
070101 Fst. Petty Cash Fund
070201 Calculate Payroll
070301 Maintain Checking Acct.
070302 Reconcile Bank Statement
070401 Maintain Stock Inventory
070501 Comp. Purch/Sales Forms

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I S S O P

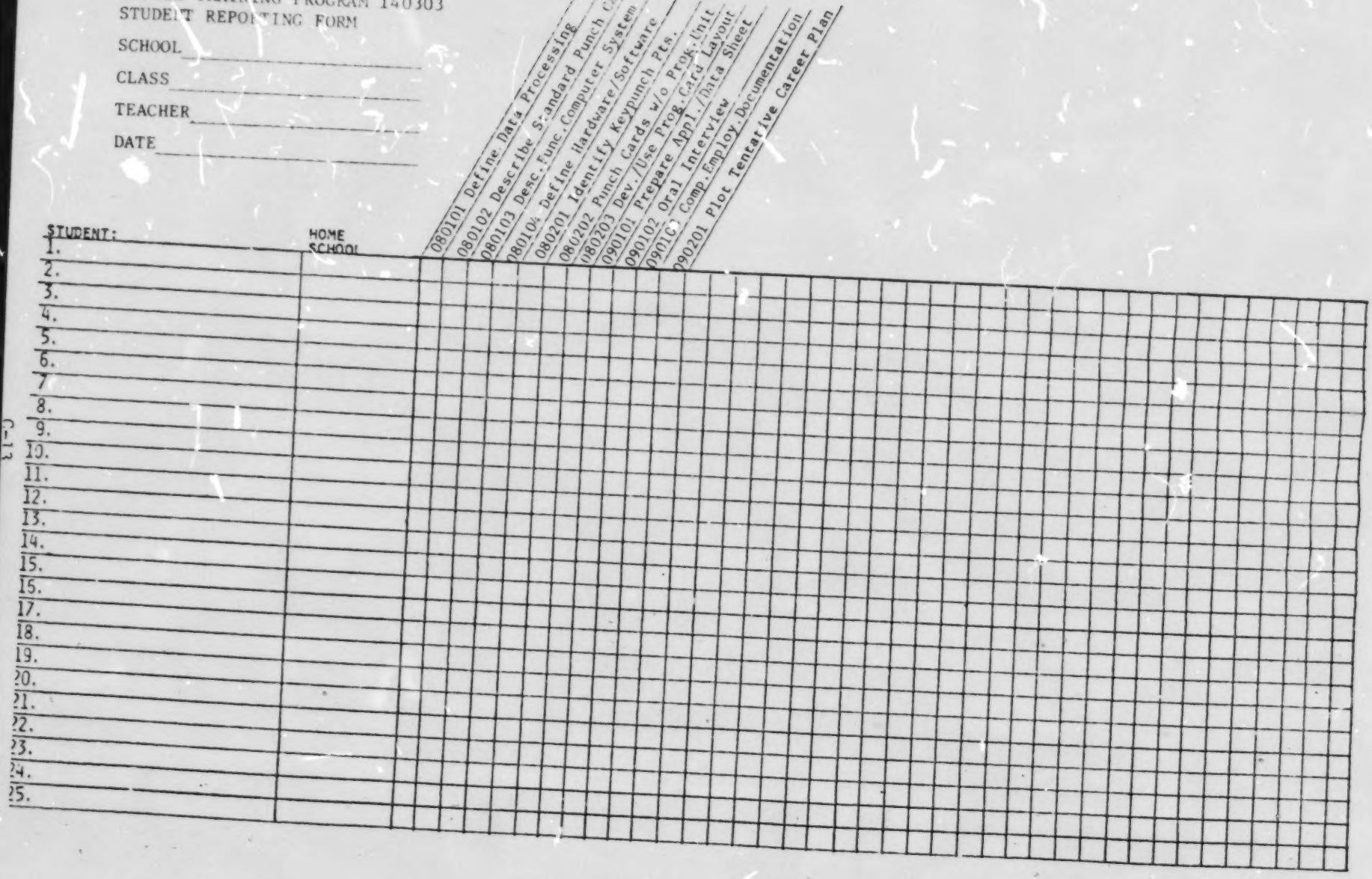
OFFICE TRAINING PROGRAM 140303
STUDENT REPORTING FORM

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____



STUDENT PERFORMANCE REPORT

NAME	DATE

USOE CODE #	COURSE	COURSE SECTION NO.
170302	Automotive Mechanics	

INSTRUCTOR	HOME SCHOOL	TOTAL DAYS ABSENT	STUDENT NO.

CODE	MODULE	PERFORMANCE/MARKING PERIOD 1	2	3	4	5	6	
010101	Identify Shop Hazards							
010201	Identify Personal Safety							
010301	Fill Out Job Application							
010401	Select Personal Goals							
010501	Identify, Use Hand Tools							
010601	Identify Shop Power Equip.							
010602	Lift Vehicle							
010701	Change Engine Oil & Filter							
010702	Lubricate Chassis							
010801	Repack Front Wheel Bearings							
010901	Rotate Tires							
010902	Repair Leaking Tire							
010903	Balance Wheels							
Unit:	CHASSIS AND FRAME							
020101	R/R Brake Shoes							
020102	R/R Parking Brake Cable							
020201	R/R Disc Brake Caliper							
020301	R/R Brake Lines							
020302	R/R Wheel Cylinder							
020303	R/R Master Cylinder							
020304	R/R Power Brake Asst. Unit							
020305	R/R Proportioning Valve							
020306	Overhaul a Cylinder							
020307	Recondition Wheel Cylinder							
020308	Overhaul Disc Brake Caliper							
020309	Machine Brake Drums							
020310	Machine Disc Brake Rotor							
020401	R/R Shock Absorbers							
020402	Measure Standing Height							
020403	Check Front End for Wear							
020404	R/R Front End Linkage							
020405	R/R Ball Joints							
020406	R/R Control Arms							
020407	R/R Coil Springs							
040101	Test Electrical System							
040102	R/R Comp. Lighting System							

STUDENT PERFORMANCE REPORT

NAME	DATE

USOE CODE #	COURSE	COURSE SECTION NO.
170302	Automotive Mechanics	

INSTRUCTOR	HOME SCHOOL	TOTAL DAYS ABSENT	STUDENT NO.

CODE	MODULE	PERFORMANCE/MARKING PERIOD 1	2	3	4	5	6	
040201	Start Engine w/booster Cable							
040202	Service/Test Battery							
040301	Test, R/R Comp. Charg. System							
040302	Test/Overhaul Alternator							
040401	Test, Diagnose, R/R Start Sys.							
040402	Overhaul Starter							
040501	Test Instruments							
040502	R/R Indicators							
040601	Test, R/R Power Antenna							
040602	Test, R/R Power Seats							
040603	Test, R/R Power Windows							
UNIT:	DRIVE LINE							
050101	R/R Universal Joint/Drive Shaft							
050103	R/R Constant Velocity Joint							
050201	R/R Differential Assembly							
050202	Overhaul Diff. Assembly							
050203	R/R Axle & Bearing Seal							
050301	R/R Clutch							
050401	R/R Manual Transmission							
050402	Overhaul Manual Transmission							
050501	R/R Automatic Transmission							
050502	Overhaul Auto. Transmission							
050503	R/R Fluid, Filter, Seal & Gas.							
050504	Adjust Bands							
050505	Adjust Linkage							
050506	Pressure Test Transmission							
UNIT:	BODY MECHANICAL							
060101	Make Minor Exterior Adj./sw							
060102	Make Windshield Wiper Repairs							
060103	Make Minor Int. Body Adjust.							
060104	Perform Major Door Adjustments							
060201	Perform Necessary Glass Adj.							
060301	Clean/Polish Interior Surfaces							
060401	Clean/Polish Exterior							
060402	Clean/Treat Vinyl Top							

STUDENT PERFORMANCE REPORT

NAME	DATE

USOE CODE #	COURSE	COURSE SECTION NO.
170302	Automotive Mechanics	

INSTRUCTOR	HOME SCHOOL	TOTAL DAYS ABSENT	STUDENT NO.

CODE	MODULE	PERFORMANCE/MARKING PERIOD 1	2	3	4	5	6	
UNIT:	ACCESSORIES							
070101	Service/Test Heater							
070201	Test Air Conditioner							
070203	R/R Components							
070204	Overhaul Air Cond. Compressor							
070301	Test/Adjust Speed Control							
070401	Test, R/R Rear Defogger							
UNIT:	CHASSIS AND FRAME contd.							
020409	R/R Torsion Bar							
020501	Perform State Inspection							
020601	Align Front End							
020701	Adjust Pitman Arm Preload							
020702	Check Oil Pressure							
020703	R/R Power Steering Pump							
020704	R/R Power Steering Pump							
020705	R/R Steering Box							
UNIT:	POWER PLANT							
030101	Inspect & Test Cooling System							
030102	Drain, Flush, Refill C.S.							
030103	R/R Minor Parts Cooling Sys.							
030104	R/R Major Parts Cooling Sys.							
030201	Service Carburetor							
030202	Overhaul Carburetor-1 Barrell							
030203	Overhaul Carburetor-2 Barrell							
030204	Overhaul Carburetor-4 Barrell							
030301	Service Fuel Stor./Del. Sys.							
040301	Service Fuel Injection Sys.							
030501	Test Primary Ignition Circuit							
030502	Replace/Adjust Primary Cir.							
030503	Overhaul Distributor							
020601	Service Ignition Sec. Comp.							
030701	Perform Minor Tune-up							
030702	Connect/Program Analyscope							
030703	Diagnose Eng. Electronically							
030801	Diagnose Autolite Elect.							
030802	R/R Comp. Autolite Ign. Sys.							

STUDENT PERFORMANCE REPORT

NAME	DATE

USOF CODE #	COURSE	COURSE SECTION NO.
170302	Automotive Mechanics	

INSTRUCTOR	HOME SCHOOL	TOTAL DAYS ABSENT	STUDENT NO.

CODE	MODULE	PERFORMANCE/MARKING PERIOD 1	2	3	4	5	6	
030803	Test Comp. Chrysler Ign. Sys.							
030804	Test GM "HEI" Dist. Coil Assem							
030901	R/R Minor Pts. Exhaust System							
030902	R/R Major Pts. Exhaust System							
031001	Identify/Test Emission Control							
031101	Service Timing Chain/Cams.							
031102	Service Pistons/Rings							
031103	R/R Crankshaft							
031104	Machine the Short Block							
031201	R/R Rocker Arms							
031202	R/R Sylinder Head							
031203	Service Cylinder Head							

STUDENT PERFORMANCE REPORT

NAME	DATE

USOE CODE #	COURSE	COURSE SECTION NO.
140303	Office Training	

INSTRUCTOR	HOME SCHOOL	TOTAL DAYS ABSENT	STUDENT NO.

CODE	MODULE	PERFORMANCE/MARKING PERIOD 1	2	3	4	5	6	
UNIT:	BASIC SKILLS REFRESHER							
010101	Use Basic English Skills							
010201	Use Basic Arithmetic Skills							
UNIT:	ORAL COMMUNICATION							
020101	Receive/Accomodate visitors							
020102	Use Telephone System & Services							
020103	Receive, Route, Place Phone Calls							
020201	Compose Written Communication							
020301	Process In-Out Communication/Mtls.							
UNIT:	WORD PROCESSING							
020101	Type Arranged Business Letter							
030102	Type Long-Unarranged Business Letter							
030103	Type 2-Page Unarranged Bus. Letter							
030104	Type Medium Unarranged Bus. Letter							
030105	Type Handwritten Memorandum							
030106	Type Arranged Table							
030107	Type Handwritten Unarranged Table							
030108	Type a Manuscript							
030201	Record-Revise-Playback Multi-copier							
030301	Transcribe Dictated Business Letter							
UNIT:	FILING AND RETRIEVAL							
040101	Alphabetic Filing							
040201	Numeric Filing							
040301	Geographic Filing							
040401	Subject Filing							
040501	Define Filing Terminology							
040502	File & Retrieve Correspondence							
UNIT:	REPROGRAPHICS							
050101	Prepare Spirit Master/Print Copies							
050201	Prepare Stencil/Print Copies							
050301	Prepare Paper Master/Print Copies							
050401	Prepare Spirit Master/Use Copy Mach.							
050501	Select Proper Duplication Process							

STUDENT PERFORMANCE REPORT

NAME	DATE

USOE CODE #	COURSE	COURSE SECTION NO.
140303	Office Tra' .ing	

INSTRUCTOR	HOME SCHOOL	TOTAL DAYS ABSENT	STUDENT NO.

CODE	MODULE	PERFORMANCE/MARKING PERIOD 1	2	3	4	5	6	
UNIT:	ADDING/CALCULATING MACHINES							
060101	Solve Problems on Ten-Key Machine							
060102	Solve Problems on Full-Key Machine							
060201	Solve Problems on Ten-Key Elec. Calculator							
060202	Solve Problems on Elec.Display Calculator							
060203	Solve Problems on Rotary Calculator							
UNIT:	FINANCIAL/RECORDKEEPING SYSTEM							
070101	Establish/Maintain Petty Cash Fund							
070201	Calculate Payroll							
070301	Maintain Checking Account Record							
070302	Reconcile Bank Statement							
070401	Maintain Stock Inventory							
070501	Complete Purchasing/Sales Forms							
UNIT:	DATA PROCESSING							
080101	Define Data Processing							
080102	Describe Standard Punch Card							
080103	Describe Function of Computer System							
080104	Define Hardware and Software							
080201	Identify Keypunch/Parts & Function							
080202	Punch Cards w/o Use of Program Unit							
080203	Develop/Use Program Card Layout							
UNIT:	EMPLOYABILITY							
090101	Prepare Application/Data Sheet							
090102	Oral Interview							
090103	Complete Employment Documentation							
090201	Plot Tentative Career Plan							

I S S O E

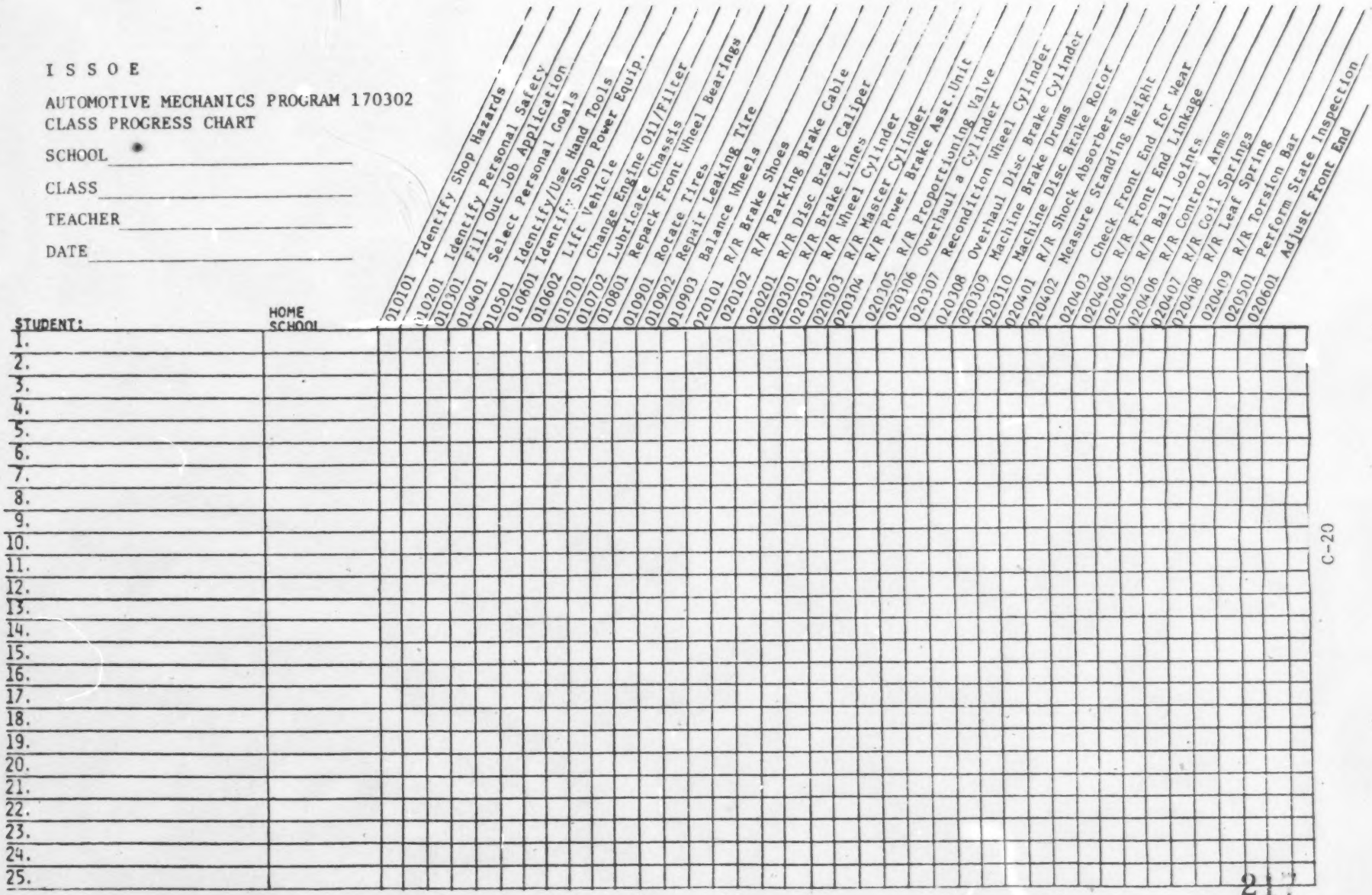
AUTOMOTIVE MECHANICS PROGRAM 170302
CLASS PROGRESS CHART

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____


010101 Identify Shop Hazards
010201 Identify Personal Safety
010301 Fill Out Job Application
010401 Select Personal Goals
010501 Identify/Use Hand Tools
010601 Identify/Use Shop Power Equip.
010602 Lift Vehicle
010701 Change Engine Oil/Filter
010702 Lubricate Chassis
010801 Repack Front Wheel Bearings
010901 Rotate Tires
010902 Repair Leaking Tire
010903 Balance Wheels
020101 R/R Brake Shoes
020102 R/R Parking Brake Cable
020201 R/R Disc Brake Caliper
020301 R/R Brake Lines
020302 R/R Wheel Cylinder
020303 R/R Master Cylinder
020304 R/R Power Brake Asst. Unit
020305 R/R Proportioning Valve
020306 Overhaul a Cylinder
020307 Recondition Wheel Cylinder
020308 Overhaul Disc Brake Cylinder
020309 Machine Brake Drums
020310 Machine Disc Brake Rotor
020401 R/R Shock Absorbers
020402 Measure Standing Height
020403 Check Front End for Wear
020404 R/R Front End Linkage
020405 R/R Ball Joints
020406 R/R Control Arms
020407 R/R Coil Springs
020408 R/R Leaf Spring
020409 R/R Torsion Bar
020501 Perform State Inspection
020601 Adjust Front End

STUDENT:	HOME SCHOOL
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I S S O E

AUTOMOTIVE MECHANICS PROGRAM 170302
CLASS PROGRESS CHART

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____

STUDENT:	HOME SCHOOL	020701 Adjust Pitman Arm Preload	020702 Check Oil Pressure	020703 R/R Power Steering Hose	020704 R/R Power Steering Pump	020705 R/R Steering Box	030101 Inspect/Test Cool.System	030102 Drain/Flush/Refill C.S.	030103 R/R Minor Pts.Cool System	030104 R/R Major Pts.Cool System	030201 Service Carburetor	030202 Overhaul Carbur.1-Barrell	030203 Overhaul Carbur.2-Barrell	030204 Overhaul Carbur. 4-Barrell	030301 Service Fuel Stor/Del.Sys.	030401 Service Fuel Inj.System	030501 Test Primary Ign.Circuit	030502 Replace/Adjust Prim.Cir.	030503 Overhaul Distributor	030601 Service Ign.Sec.Comp.	030701 Perform Minor Tune-up	030702 Connect/Program Analyscope	030703 Diagnose Eng.Electronically	030801 Diagnose Autolite Elect.	030802 R/R Comp.Autolite Ign.Sys.	030803 Test Comp.Chrysler Ign.Sys.	030804 Test GM "HEI" Dist.Coil	030901 R/R Minor Pts.Exhaust Sys.	030902 R/R Major Pts. Exhaust Sys.	031001 Identify/Test Emission Ctr	031101 Service Timing Chain/Cams.	031102 Service Piston/Rings	031103 R/R Crankshaft	031104 Machine the Short Block	031201 R/R Rocker Arms	031202 R/R cylinder Head	031203 Service Cylinder Head	040101 Test Electrical System	040102 R/R Comp.Lighting System	040201 Start Eng.w/Booster Cable
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I S S O E

AUTOMOTIVE MECHANICS PROGRAM 170302
CLASS PROGRESS CHART

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____

STUDENT:	HOME SCHOOL	040202 Service/Test Battery	040301 Test,R/R Comp.Charge Syst.	040302 Test/Overhaul Alternator	040401 Test,Diagnose, Start Sys.	040402 Overhaul Starter	040501 Test Instruments	040502 R/R Indicators	040601 Test,R/R Power Antenna	040602 Test, R/R Power Seats	040603 Test, R/R Power Windows	050103 R/R Univ.Joint/Drive Shaft	050201 R/R Constant Velocity Joint	050202 Overhaul Differential Assembly	050203 R/R Axle & Bearing Seal	050301 R/R Clutch	050401 R/R Manual Transmission	050402 Overhaul Manual Trans.	050501 R/R Automatic Transmission	050502 Overhaul Automatic Trans.	050503 R/R Fluid,Filter,Seal,Gas.	050504 Adjust Bands	050505 Adjust Linkage	050506 Pressure Test Transmission	060101 Make Minor Ext.Adj.S/W	060102 Make Windshield Wiper Rep.	060103 Make Minor Int.Body Adj.	060104 Perform Major Door Adj.	060201 Perform Nec.Glass Adj.	060301 Clean/Polish Interior	060401 Clean/Polish Exterior	060402 Clean/Treat Vinyl Top	070101 Service/Test Heater	070201 Test Air Conditioner	070202 Evacuate/Charge Air Cond.	070203 R/R Components	070204 Overhaul Air Cond.Compres.	070301 Test/Adjust Speed Control	070401 Test,R/R Rear Defogger
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I S S O E

OFFICE TRAINING PROGRAM 140303
CLASS PROGRESS CHART

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____

STUDENT:	HOME SCHOOL	010101 Use Basic English Skills.	010201 Use Basic Arithmetic Skills	020101 Receive/Accomodate Visitors	020102 Use Phone Systems & Serv.	020103 Receive, Route Place Calls	020201 Compose Written Comm.	020301 Process In-Out Comm.	030101 Type Art. Business Letter	030102 Type Long-Unarr. Bus. Letter	030103 Type 2-page Unarr. Bus. Letter	030104 Type Med. Unarr. Bus. Letter	030105 Type Handwritten Memo	030106 Type Arranged Table	030107 Type Handwritten Unarr. Table	030108 Type a Manuscript	030201 Record-Revise Unarr. Table	030301 Transcribe Multi-copier	040101 Alphabetic Filing	040201 Numeric Filing	040301 Geographic Filing	040401 Subject Filing	040501 Define Filing Terminology	040502 File & Retrieve Corres.	050101 Prepare Spirit Master/Copies	050201 Prepare Stencil/Copies	050301 Prepare Paper Master/Copies	050401 Prepare Spirit Master/Copies	050501 Select Proper Dupl. Process	060101 Solve Problems/Ten-Key	060102 Solve Problems/Full-Key	060201 Solve Problems Elec. Cal.	060202 Solve Problems Elec. Dis.	060203 Solve Problems Rotary Cal.	070101 Fst. Petty Cash Fund	070201 Calculate Payroll	070301 Maintain Checking Acct.	070302 Reconcile Bank Statement	070401 Maintain Stock Inventory	070501 Comp. Purch/Sales Fo-
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I S S O E

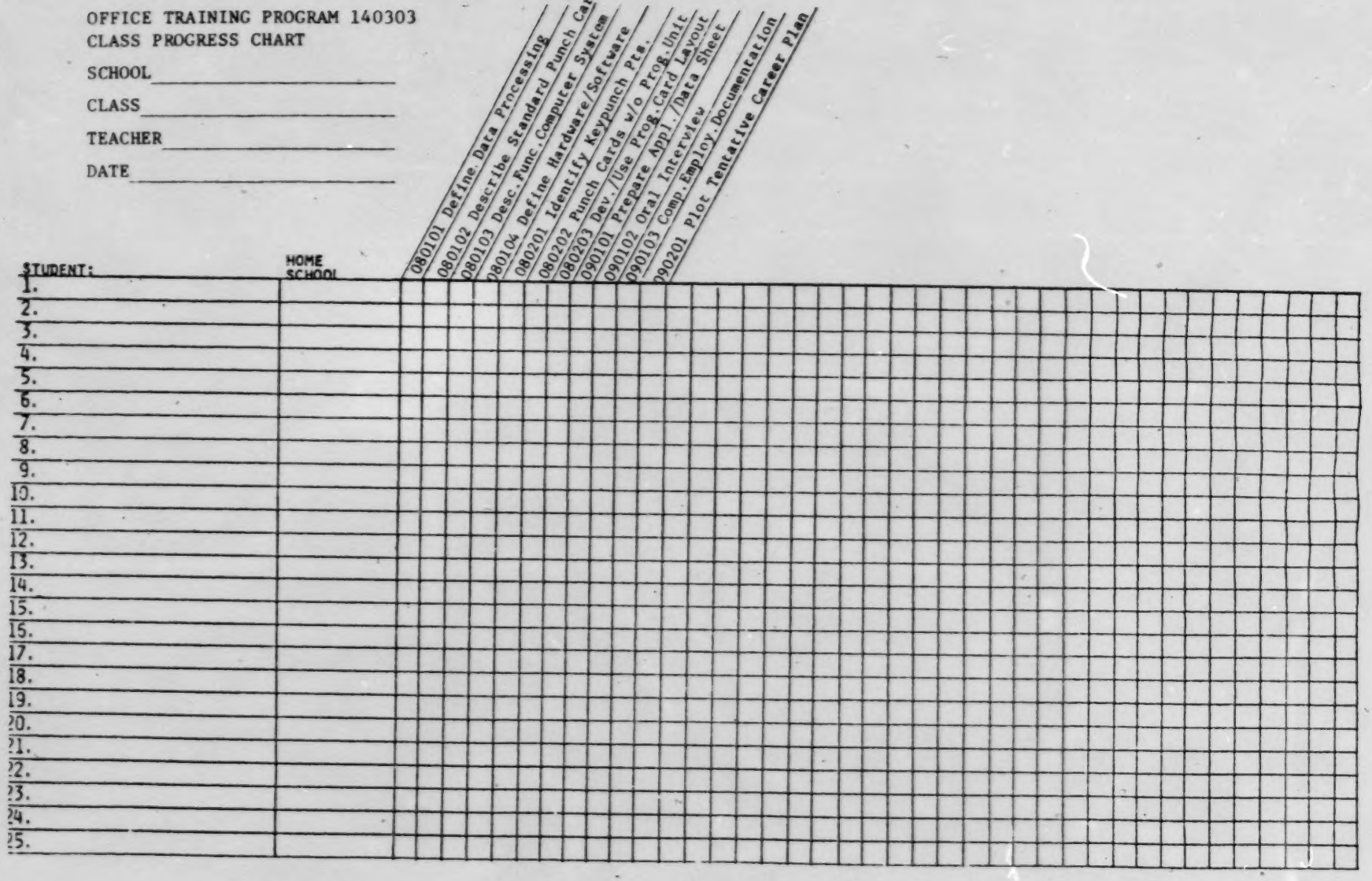
OFFICE TRAINING PROGRAM 140303
CLASS PROGRESS CHART

SCHOOL _____

CLASS _____

TEACHER _____

DATE _____



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STUDENT PROGRESS REPORT

SCHOOL: _____

OFFICE TRAINING - 140303

STUDENT	TEACHER
222.387-058	Stock Clerk
DOT CODE	DOT JOB TITLE

*ISSOE TASKS AND SCORE:

Alphabetize Names for Filing	_____
Arrange Numerically for Filing	_____
Arrange Names Geographically for Filing	_____
Categorize by Subject for Filing	_____
Organize, File & Retrieve Correspondence	_____
Solve Problems on Ten Key Add/List Machine	_____
Solve Problems on Electronic Display Calculator	_____
Establish, Maintain & Replenish Petty Cash Fund	_____
Maintain a Stock Inventory	_____
Complete Purchasing and Sales Forms	_____
CUMMULATIVE SCORE	_____

*Have not been verified.

STUDENT PROGRESS REPORT

SCHOOL: _____

AUTOMOTIVE MECHANICS - 170302

STUDENT	TEACHER
915.467-010	Service Station Attendant - Auto
DOT CODE	DOT JOB TITLE

*ISSOE TASKS AND SCORE:

Identify Shop Hazards	_____
Identify Personal Safety	_____
Identify Shop Power Equipment	_____
Lift Vehicle	_____
Change Engine Oil and Filter	_____
Lubricate Chassis	_____
Repack Front Wheel Bearing	_____
Rotate Tires	_____
Repair Leaking Tire	_____
Balance Wheels	_____
Inspect and Test Cooling System	_____
Drain, Flush and Refill Cooling System	_____
R/R Lighting System Components	_____
Cummulative Score	_____

*Have not been verified.

RECORD OF ACHIEVEMENT

_____

ATTENDED

_____

AT _____

FROM _____ TO _____

AND ATTAINED THE FOLLOWING COMPETENCIES:

ISSOE PROGRAMS

_____

BOCES OR SCHOOL

AUTO MECHANICS

Name

School

Rating:

10 Performs task without supervision/assistance, can lead others in performing task. Has initiative and adaptability to special problems

9.0 Performs task without supervision/assistance with proficiency in speed/quality.

8.0 Performs task satisfactorily without supervision/ assistance

7.0 Performs task satisfactorily requires periodic supervision/ assistance.

6.5 Performs task, requires considerable supervision/ assistance. Meets minimum job standards.

Ratings based on industrial performance standards. They are confirmed by instructor:

Instructor Date

A letter of reference attesting to the individual's attendance, punctuality, and work habits is available from school's office.

Introduction to Auto Mechanics	Identify Shop Hazards	Identify Personal Safety	Fill Out Job Application	Select Personal Goals	Use/Care Hand Tools	Use Shop Power Equipment
Chassis and Frame	R&R Brake Shoes	R&R Parking Brake Cable	R&R Disc Brake	R&R Brake Lines	R&R Wheel Cylinder	R&R Master Cylinder
	Check Front End for Wear	R&R Front End Linkage	R&R Ball Joints	R&R Control Arms	R&R Coil Springs	R&R Leaf Spring
Power Plant	Test Cooling System	Flush Cooling System	R&R Minor Pts.Cooling System	R&R Major Pts.Cooling System	Service Carburetor	Overhaul 1 Barrel Carburetor
	Program Analyscope	Diagnose Engine Electronically	Diagnose Autolite Ignition	Service Autolite Ign.System	Service Chrysler Elec.Ign. Sys.	Service GM H.E.I. Assembly
Electrical	Test Electrical System	Service Lighting System	Use Booster Cable	Service/ Test Battery	Service Charging System	Test/Overhaul Auto. Alternator
Drive Line	R&R Universal Joint/Drive Shaft	R&R Constant Velocity Joint	R&R Differential Assembly	Overhaul Differential Assembly	R&R Axle	R&R Clutch
Body Mechanical and Accessories	Make Minor Ext.Body Adjustment	Make Major Windshield Wiper Rep.	Make Minor Int.Body Adjustment	Perform Major Door Alignment	Perform necessary glass adjustments	Clean/polish Interior Surfaces

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Lift Vehicle	Change Eng. Oil/Filter	Lubricate Chassis	Repack Front Wheel Bearings	Rotate Tires	Repair Leaking Tire	Balance Wheels		
R&R Power Assist Unit	R&R Proportioning Valve	Overhaul Master Cylinder	Recondition Wheel Cyl.	Overhaul Disc.Brake Caliper	Machine Brake Drums	Machine Disc Brake	R&R Shock Absorbers	R&R Shock Absorbers
Measure Standing Height	R&R Torsion Bar	Perform State Insp.	Align Front End	Adjust Pitman Arm	Check Oil Pressure P/S	R&R P/S Hose	R&R P/S Pump	R&R Steering Box
Overhaul 2 Barrel Carburetor	Overhaul 4 Barrell Carburetor	Service Fuel System	Service Fuel Inject. System	Test Prim. Ignition Circuit	Service Prim.Cir. Components	Overhaul Distributor	Service Ign. Secondary Components	Perform Minor Tune-up
R&R Minor Pts.Exhaust System	R&R Major Pts. Exh. System	Identify/ Test Emis. Controls	Service Timing Chain Camshaft	Service Pistons/ Rings	R&R Crankshaft	R&R Rocker Arms	R&R Cyl. Head	Service Cylinder Head
Service Starting System	Overhaul Starter	Test Instruments	R&R Indicators	Service Power Antenna	Service Power Seats	Service Power Windows		
R&R Manual Transmission	Overhaul Manual Trans.	R&R Auto. Transmission	Overhaul Auto.Transmission	Service Auto Transmission	Adjust Bands	Pressure Test Trans.	Adjust Linkage	
Clean/Polish Ext.	Clean/Treat Vinyl Top	Service/ Test Heater	Test Air Conditioner	Evacuate/ Charge Air Conditioner	R&R Components	Overhaul Air Cond. Compressor	Service Speed Cont. Devices	Service Rear Defog./ Defroster

RECORD OF ACHIEVEMENT

_____

ATTENDED

_____

AT _____

FROM _____ TO _____

AND ATTAINED THE FOLLOWING COMPETENCIES:

ISSOE PROGRAMS

_____

BOCES OR SCHOOL

OFFICE TRAINING

Name

School

Rating:

10 Performs task without supervision/assistance, can lead others in performing task. Has initiative and adaptability to special problems.

9.0 Performs task without supervision/assistance with proficiency in speed/quality.

8.0 Performs task satisfactorily without supervision/ assistance.

7.0 Performs task satisfactorily requires periodic supervision/ assistance.

6.5 Performs task, requires considerable supervision/ assistance. Meets minimum job standards.

Ratings based on industrial performance standards. They are confirmed by instructor.

Instructor Date

A letter of reference attesting to the individual's attendance, punctuality, and work habits is available from school's office.

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Basic Skills and Employability	Use basic English	Use basic Math	Application & data	Interview Job Quali.	Employment Documen.	Career Path
Communication Skills	Receive Visitors	Telephone Test	Telephone Simulation	Written Communica.	Process incoming/ outgoing mtls.	
Word Processing	Type arr. bus.letter	Type long unarr.bus. ltr.	Type 2-page unarr.bus. ltr.	Type unarr. memo	Type mul. add.memo	Type arr. table
	Type unarr. table	Type manuscript	Rec.,revise mul.copies	Transcribe dictation		
Filing and Retrieval	Alphabetize	Numerically	Geographically	Subject filing	Terminology	Corres. filing
Reprographics	Spirit Master	Stencil	Paper Master	Use copy machine	Duplication processes	
Adding/ Calculating Machines	Ten-key add	Full-key add	Ten-key print.cal.	Electronic display cal	Rotary Calculator	
Financial/ Recordkeeping Systems	Petty Cash Fund	Payroll	Checking Account	Bank Statement	Inventory	Purchasing/ Sales
Data Processing	Data Processing	Describe Computer Systen	Hardware/ Software	Identify Machine Pts	Punch Cards	Program Card

Appendix A

ISSOE

Steering Committee Members

ISSOE Steering Committee Members

Douglas Adamson, Director
Division of Occupational
Education Instruction
State Education Department
99 Washington Avenue
Albany, New York 12230

Peter Cooke, Associate
Division of Occupational
Education Instruction
99 Washington Avenue
Albany, New York 12230

V. Frank Blasio, Principal
BOCES Southwest Center
73 East Merrick Road
Freeport, New York 11520

Joseph Carr
L.B.Foreman Area Educ.Center
41 O'Connor Road
Fairport, New York 14450

Steve Cook
Roberts Chevrolet
Hicksville Rd. & Old Country Rd.
Hicksville, New York 11801

Willard Daggett, Associate
Bureau of Business Education
State Education Department
Twin Towers
Albany, New York 12210

James Decker
L.B.Foreman Educ. Center
41 O'Connor Road
Fairport, New York 14450

Michael Divito
Rochester City School District
410 Alexander Street
Rochester, New York 14614

William Drake
Department of Education
206 Stone Hall
Cornell University
Ithaca, New York 14853

Justice Cheney
Vocational-Technical Education
Upper Division-SUNY Utica/Rome
811 Court Street
Utica, New York 13502

Edgar Hollwedell
Director of Occupational Education
Rochester City School District
410 Alexander Street
Rochester, New York 14614

James McElhatten, Principal
Broome-Tioga Occupational Center
Upper Glenwood Road
Binghamton, New York 13905

Rodney Richards
Regional Computer Center
314 Lakeside Road
Syracuse, New York 13209

James Rosa, Occupational Analyst
New York State Employment Service
540 E. Main Street
Rochester, New York 14604

Rudolph Schneider
R. D. #1
Bath, New York 14810

Patrick Shaughnessy
Onondaga-Madison BOCES
6820 Thompson Road
Syracuse, New York 13211

Richard Smith, Principal
Whitney Point Central School
Keibel Road
Whitney Point, New York 13862

Donald Schank
4958 Trivet Drive
Liverpool, New York 13088

Charles Stebbins, Associate
Bureau of Trade, Technical & Service
Education
State Education Department
99 Washington Avenue
Albany, New York 12230

Barbara Thomas
Cortland-Madison BOCES
Clinton Avenue Extension
Cortland, New York 13046

Frank Wolff, Assistant Exec. Supt.
Nassau BOCES, Salisbury Center
Valentine Rd. & The Plains Road
Westbury, New York 11590

Gerald Zinczyn
John Marshall High School
180 Ridgeway Avenue
Rochester, New York 14615

Pellegrino Zuzio
2505 Riverside Avenue
Seaford, New York 11783

Appendix B

Sample

ISSOE Student Reporting System

Output Forms

I S S O E

AUTOMOTIVE MECHANICS PROGRAM 170302
CLASS PROGRESS CHART
SCHOOL Nassau BOCES S.W.
CLASS Automotive Mechanics
TEACHER D. Zuzio
DATE June 12, 1978

HOME SCHOOL	010101 IDENTIFY SHOP HAZARDS	010201 IDENTIFY PERSONAL SAFETY	010601 IDENTIFY SHOP POWER EQUIPMENT	010602 LIFT VEHICLE	010701 CHANGE ENGINE OIL & FILTER	010702 LUBRICATE CHASSIS	010801 REPACK FRONT WHEEL BEARING	010901 ROTATE TIRES	010902 REPAIR LEAKING TIRE	010903 BALANCE WHEELS	020501 PERFORM STATE INSPECTION	030101 INSP. & TEST COOLING SYST.	030102 DRAIN, FLUSH & REFILL COOLING SYST.	030103 R/R MINOR PARTS, COOLING SYST.	030201 SERVICE CARBURETOR	030502 TEST PRIMARY IGNITION CIRCUIT	030601 SERV. SECONDARY IGN. COMPONENTS	030701 PERFORM MINOR TUNE-UP	030901 R/R MINOR PARTS EXHAUST SYST.	040101 TEST ELECTRICAL SYST.	040102 R/R LIGHT. SYST. COMPONENTS	040201 USING BOOSTER CABLES	040202 SERV. & TEST BATTERY	020101 TEST INSTRUMENT INDICATOR	020102 R/R BRAKE SHOES	020201 R/R PARKING BRAKE CABLE	020301 R/R DISC BRAKE	020302 R/R BRAKE LINE	020303 R/R WHEEL CYLINDER	020304 R/R MASTER CYLINDER	020305 R/R POWER BRAKE ASSIST UNIT	020306 OVERHAUL PROPORTIONING VALVE	020307 RECONDITION MASTER CYLINDER	020308 OVERHAUL WHEEL CYLINDER	020309 MACHINE BRAKE DRUM & DISC	020310 MACHINE BRAKE CALIPER
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STUDENT PERFORMANCE REPORT

NAME	DATE
I.	

USOE CODE #	COURSE	COURSE SECTION NO.
170302	AUTOMOTIVE MECHANICS	

INSTRUCTOR	HOME SCHOOL	TOTAL DAYS ABSENT	STUDENT NO.
D. Zuzio			

CODE		PERFORMANCE/MARKING PERIOD 1	2	3	4	5	6
010101	Identify Shop Hazards	6					
010201	Identify Personal Safety	7					
010601	Identify Shop Power Equipment	8					
010602	Lift Vehicle	7					
010701	Change Engine Oil and Filter	7					
010702	Lubricate Chassis	7					
010801	Repack Front Wheel Bearing	7					
010901	Rotate Tires	9					
010902	Repair Leaking Tire	9					
010903	Balance Wheels	8					
020501	Perform State Inspection	7					
030101	Inspect and Test Cooling System	7					
030102	Drain, Flush and Refill Cooling System	9					
030103	R/R Minor Parts, Cooling System	8					
030201	Service Carburetor	7					
030502	Test Primary Ignition Circuit	7					
030601	Service Secondary Ignition Components	7					
030701	Perform Minor Tune-up	8					
030901	R/R Minor Parts Exhaust System	10					
040101	Test Electrical System	8					
040102	R/R Lighting System Components	9					
040201	Using Booster Cables	10					
040202	Service and Test Battery	7					
040501	Test Instrument Indicator	9					
020101	R/R Brake Shoes	8					
020102	R/R Parking Brake Cable	7					
020201	R/R Disc Brake	8					
020301	R/R Brake Line						
020302	R/R Wheel Cylinder	9					
020303	R/R Master Cylinder	9					
020304	R/R Power Brake Assist Unit	8					
020305	R/R Proportioning Valve						
020306	Overhaul Master Cylinder	7					
020307	Recondition Wheel Cylinder	8					
020308	Overhaul Disc Brake Caliper						
020309	Machine Brake Drum and Disc	8					

STUDENT PROGRESS REPORT

SCHOOL: Nassau BOCES S.W.

AUTOMOTIVE MECHANICS - 170302

I	D. Zuzio
STUDENT	TEACHER
915.467-010	Service Station Attendant - Auto
DOT CODE	DOT JOB TITLE

*ISSOE TASKS AND SCORE:

Identify Shop Hazards	6
Identify Personal Safety	7
Identify Shop Power Equipment	8
Lift Vehicle	7
Change Engine Oil and Filter	7
Lubricate Chassis	7
Repack Front Wheel Bearing	7
Rotate Tires	9
Repair Leaking Tire	9
Balance Wheels	8
Inspect and Test Cooling System	7
Drain, Flush and Refill Cooling System	9
R/R Lighting System Components	9
Cummulative Score	7.7

*Have not been verified.

STUDENT PROGRESS REPORT

SCHOOL: Nassau BOCES S.W.

AUTOMOTIVE MECHANICS - 170302

I	D. Zuzio
STUDENT	TEACHER
620.281-066	TUNE-UP MECHANIC
DOT CODE	DOT JOB TITLE

*ISSOE TASKS AND SCORE:

SERVICE CARBURETOR	7
TEST PRIMARY IGNITION CIRCUIT	7
SERVICE SECONDARY IGNITION COMPONENTS	7
PERFORM MINOR TUNE-UP	8
TEST ELECTRICAL SYSTEM	8
R/R LIGHTING SYSTEM COMPONENTS	9
USING BOOSTER CABLES	10
SERVICE AND TEST BATTERY	7
TEST INSTRUMENT INDICATOR	9
CUMMULATIVE SCORE	8.0

*HAVE NOT BEEN VERIFIED

STUDENT PROGRESS REPORT

SCHOOL: Nassau BOCES S.W.

AUTOMOTIVE MECHANICS - 170302

1	D. Zuzio
STUDENT	TEACHER
620.281-026	Brake Mechanic - Auto
DOT CODE	DOT JOB TITLE

*ISSOE TASKS AND SCORE:

Identify Shop Power Equipment	8
Lift Vehicle	7
Repack Front Wheel Bearing	7
R/R Brake Shoe	8
R/R Parking Brake Cable	7
R/R Disc Brakes	8
R/R Brake Line	
R/R Wheel Cylinder	9
R/R Master Cylinder	9
R/R Power Brake Assist Unit	8
R/R Proportioning Valve	
Overhaul Master Cylinder	7
Recondition Wheel Cylinder	8
Overhaul Disc Brake Caliper	
Machine Brake Drum and Disc	8
Cummulative Score	

*Have not been verified.

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